US Energy Policy and its Position in the United Nations Framework Convention on Climate Change (UNFCCC) Negotiations: A Theory-Guided Historical Analysis

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Thesis Presented for the Degree of

DOCTOR OF PHILOSOPHY

In the Energy Research Centre

Faculty of Engineering & the Built Environment

UNIVERSITY OF CAPE TOWN

Energy & Development Studies

October 2019

Supervised by Dr Andrew Marquard and Associate Professor Karen Smith

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own.

Signed by candidate

26 October 2019

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Acknowledgement

I would like to extend an acknowledgement and thanks to all those who have contributed to the completion of my thesis. They have my gratitude.

I wish to thank and acknowledge the National Research Foundation (NRF) and the Deutscher Akademischer Austauschdienst (DAAD) for the funding provided through the NRF-DAAD Doctoral Award. I wish to thank and acknowledge the University of Cape Town for the funding provided through the Doctoral Research Scholarship, Siri Johnson Scholarship and Twamley P/G Bursary.

I would like to thank my supervisors, Dr Andrew Marquard and Professor Karen Smith, for all their support, discussions and advice during the completion and finalisation of this thesis.

To my family, thank you for all your love and for everything that you have done for me.

A word of thanks is extended to the following UCT staff members: Bongiwe Ndamane, Whitley Makhari, Janine Isaacs and Lisa Williams.

I would also like to thank the following individuals: Candice Graham, Debbie Sparks, Astrid Ludemann, Nonna Gordon, Piet and Ann van Staden, Carol Romeis, Lydia-Anne de Wet, oom Piet and tannie Elize, Jeannine and Johan Crafford, as well as Zelda and Carel Laubscher. In addition, I would also like to thank Professor Mark New and Professor Peter Meissner for their helpful advice.

I would like to also thank the staff of the Cape Town Holocaust Centre. Thank you for all that you have taught me. A special thanks to Diana Henning.

I would like to thank Pastor Tiny and Sue Coupar, Pastor Herman and Helga de la Guerre, Pastor Mark and Debbie Christopher, Roger Jenkins and tannie Madilda.

To Martha Barnard and Loffie van Pletzen: you will never be forgotten. Thank you.

I would like to thank my Lord and Saviour, Jesus Christ, whose grace was sufficient unto me, "…so they may know that this is Your hand and that you, Lord, have done it." (Psalm 109:27). May this thesis be to the glory of God.

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Abstract

The multilateral negotiations aimed at securing international cooperation on climate change and its mitigation have widely been criticised as a political deadlock since the establishment of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992. Since the formation of the UNFCCC, the United States of America (USA) has being recognised as both an essential, but also as a highly controversial actor within the negotiations due to its historical responsibility for anthropogenic climate change and relative structural power which has allowed it to wield immense influence in the negotiations. Because of energy's essential input into all economic sectors, any attempts to mitigate climate change will influence a sector that is essential for a country's economic strength. Within these processes, there is a link between energy policy and the UNFCCC negotiations.

The overarching research aim of this interdisciplinary study is to understand the historical interaction between the USA's energy policy and its negotiating position in the UNFCCC. Within these dynamics, understanding how different administrations attempt to balance competing policy goals are pivotal in understanding these dynamics within domestic and international constraints. This study analyses this by conducting a historical case study of the USA's position in these negotiations and how its energy policy interacts with this. This study makes use of the neoclassical realist framework to understand the cooperation of the USA through the interaction between its energy policy and its position in the UNFCCC negotiations within two levels of analysis, that is the unit- and structural-levels, referring to factors found at the state-level and the international distribution of power respectively. The policy positions and energy policies of the administrations of George H.W. Bush (1989 – 1993), Bill Clinton (1993 – 2001), George W. Bush (2001 – 2009) and Barack Obama (2009 – 2017) are investigated through the interaction of the unit- and structural-levels. A historical overview indicates the challenges that succeeding administrations faced in grappling with contradictory policy objectives in accordance with the perceived costs of various policy goals at both the domestic and international levels and its implications for their position and ability to cooperate within the UNFCCC.

The thesis has indicated that the history of the United States' position in the negotiations and the analysis of the influences on this position reveal that simple mono-causal explanations cannot satisfactorily attribute the differences amongst US administrations therein. As such, since 1992, successive US administrations have displayed varying degrees of cooperation

towards the UNFCCC that have been based on the domestic and international distribution of power, and policy-makers' perception of the related costs and benefits of pursuing a set of policy goals. The research has established that since the 1970s, efforts to design US energy policy to factor in environmental externalities have resulted in haphazard progress as two ideational frameworks emerged, one that viewed economic growth and environmental regulation as compatible, and another that promoted the opposing view, which has resulted in stalemate and a cyclical approach complicating the interaction between US energy policy and its position in the UNFCCC. Within these dynamics, domestic constraints, *à la* the two-level game, place an important limitation on US participation and ratification of climate change agreements and its energy policy and highlights the important role played by domestic institutions with bipartisan politics and ideology forming a staggering fissure. The thesis has found that rather than an objective set of criteria, policy-makers are influenced by a complex range and interaction of factors in their approach to energy policy, international negotiations, as well as international opportunities and threats. Within these dynamics, the structure of the international system is essential in understanding state behaviour. The thesis confirms that the influence of the distribution of power in the international system therefore complements domestic factors in analysing the motivation and behaviour of policy-makers acting on behalf of the state, although it is imperative to understand how its influence is filtered at the unit-level. Understanding the historical context permits deeper insights into the multi-dimensional influences on decision-makers. It is therefore necessary to delve into the historical origins of state behaviour and the evolution of their domestic and foreign policies.

ACRONYMS

ACES	American Clean Energy and Security Act
ANWR	Arctic National Wildlife Refuge
AR2	Second Assessment Report
ARRA	American Recovery and Reinvestment Act of 2009
AWG-KP	Ad Hoc Group on Further Commitments under the Kyoto Protocol
AWG-LCA	Ad-Hoc Working Group on Long-Term Cooperative Action under the Convention
BASIC	Brazil, South Africa, India and China
BTU	British Thermal Unit
CAP	Climate Action Plan
CAR	Climate Action Report
CBDR	Common but Differentiated Responsibilities
CCAP	Climate Change Action Plan
CCRI	Climate Change Research Initiative
CCTDP	Clean Coal Technology Demonstration Programme
CCTP	Climate Change Technology Programme
CDM	Clean Development Mechanism
CFCs	Chlorofluorocarbons
CO_2	Carbon Dioxide
COP	Conference of the Parties
CPP	Clean Power Plan
ECOSOC	Economic and Social Council
EPA	Environmental Protection Agency
EPACT92	National Energy Policy Act of 1992

EPACT 2005	Energy Policy Act of 2005
EU	European Union
FDI	Foreign Direct Investment
FPA	Foreign Policy Analysis
G77	Group of 77
G20	Group of 20
GDP	Gross Domestic Product
GHGs	Greenhouse Gases
GW	Gigawatts
GNP	Gross National Product
IEA	International Energy Agency
INC	Intergovernmental Negotiating Committee
INDCs	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
IR	International Relations
JI	Joint Implementation
LRTAP	Long Range Transboundary Air Pollution
MAD	Mutually Assured Destruction
MEAs	Multilateral Environmental Agreements
MENA	Middle East and North Africa
MOP	Parties to the Kyoto Protocol
NAFTA	North American Free Trade Agreement
NCCTI	National Climate Change Technology Initiative
NCR	Neoclassical Realism

NPC	National Petroleum Council
NSRB	National Security Resources Board
OECD	Organisation for Economic Cooperation and Development
OPEC	Organisation of Petroleum Exporting Countries
QER	Quadrennial Energy Review
R&D	Research and Development
SWCC	Second World Climate Conference
TRC	Texas Railroad Commission
UNCED	United Nations Conference on the Environment and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
USGCRP	US Global Change Research Programme
USSR	Union of Soviet Socialist Republics
WMO	World Meteorological Organisation
WST	World Systems Theory
WTO	World Trade Organisation

Chapter 1

Introduction

1.1 General Introduction

Climate change has emerged as one of the central policy challenges facing decision-makers requiring a solution that cannot be based on domestic action alone, but that requires a concerted global effort. Since 1992, efforts to address this issue in a multilateral forum as embodied by the United Nations Framework Convention on Climate Change (UNFCCC) have been met with stalemate and incremental progress as the negotiations remain divided (Harris, 2008:455, 671; Keohane and Victor, 2010:2). At its crux, divergent groupings of nations seemed unable to reach a pragmatic agreement to mitigate climate change through the reduction of greenhouse gases (GHGs). Thereby, two issues remained unresolved: which mitigation targets should each country assume, and secondly, how to share the reduction of emissions in a fair and equitable manner amongst states (Bodansky, 2001: 29 – 33; Newell and Paterson, 1998: 681; Collins, 1991:340). As such, analyses of the UNFCCC negotiations and states' positions therein have been characterised by controversy and complexity.

Throughout the history of the UNFCCC negotiations, the United States of America (USA) has occupied a unique position therein and has being recognised as both an essential, but also a highly controversial actor; given that it has been both a catalyst but also an impediment within these negotiations. During the 1990s and early to mid-2000s, its insistence on the use of nationally determined actions instead of quantified, legally-binding emission targets, and that developing nations limit their emissions (Agrawala and Steinar Andresen, 1999:464), have drawn severe criticism from other countries and civil society organisations. This led to a decade long impasse with the Paris Agreement of 2015 been heralded as a major step forward as the Nationally Determined Contributions (NDCs) were the result of a long negotiation process and are both nationally-determined and non-legally binding, thereby meeting the key demands of the United States (Centre for Climate and Energy Solutions, s.a.; Stavins and Stowe, 2016:1). Hence, for the negotiations to be successful, the cooperation of the USA in designing a treaty as endorsed by the scientific community that would prevent dangerous, anthropogenic climate change is essential. Critics, however, have strongly admonished the USA for its laggard and often obstructionist role throughout the history of the global climate change negotiations and the associated tasks of tackling global climate change mitigation.

What complicates any analysis of the USA's position is that the politics of climate change in the United States are highly contested and complex offering numerous examples as well as counter-examples of action and inaction. The USA's role is thus far more complex than what critics may be willing to acknowledge as it is a nuanced actor with a set of conflicting, multi-dimensional interests. Within these conflicting patterns, it is not clear why historically consecutive administrations adopted different foreign policies towards the UNFCCC and what had influenced the USA's position in these negotiations.

Anthropogenic climate change is mainly caused by fossil fuel-based energy since it is predominantly the GHGs released by the energy supply sector since the 1750s that are responsible for 35% of total GHG emissions (IPCC, 2007:516; Shaffer, 2009). In order to mitigate climate change, and avert the worst of its consequences, the reduction of GHGs through a socio-economic transition to a low carbon energy system is demanded by a set of actors. However, this is a challenge for the USA because for over a century it has depended on the production of fossil fuel energy to maintain its industrialisation and impressive economic growth. A historical overview indicates that throughout the twentieth century, US energy policy has been centred around fossil fuel production and use, which resulted in low energy prices for consumers and industries, offering it a source of comparative advantage in international markets. However, with the oil crisis of 1973, energy policy became a major federal preoccupation, presenting a set of conflicting and multi-dimensional issues for decision-makers to solve. Since the 1970s, various administrations have struggled to balance various policy goals which have included maintaining economic growth and the competitiveness of US industries, while integrating various environmental objectives, including climate change, into US energy policy design. With conflicting and an ever-increasing set of policy goals, decision-makers have found it progressively more difficult to evaluate and meet competing policy objectives in a comprehensive policy design at both the domestic and international levels. Within this configuration, successive administrations would attempt to design US energy policy to meet contradictory objectives related to the perceived costs and benefits of various policy goals. Thereby creating a comprehensive energy policy that could be congruent with the objectives of the UNFCCC has been a challenge for these administrations.

Analysts point out that the current fossil-fuel based energy system is facing three interconnected challenges, that of climate change, energy access and energy security (Cherp *et al.*, 2011; Grubler, 2012: 8; Meadowcroft, 2006:59). Both domestically and internationally,

the climate change negotiations are divisive. Not only do they require trade-offs to be made between certain policy designs, economic growth, and energy use, but they also involve questions surrounding the redistribution of costs and benefits across and within states as well as the appropriate role for government within an already difficult negotiating atmosphere. The contested nature of the mitigation of climate change, and the need to transform the global energy system, aggravated the political conflicts within the negotiations (Bulekeley, 2001; Shaffer, 2009; Yergin, 2012). Because energy is at the core of a well functioning society, economic performance, development and a host of other functions all depend on the secure, affordable and reliable access to energy sources and services. Per consequence, energy policy remains at the epicentre of economic growth and international relations because of the global trade in energy carriers, competitiveness requirements and carbon leakage presenting trade-offs and conflicting national objectives.

1.2 Problem Statement and Rationale

The USA remains a central actor in the UNFCCC negotiations whose behaviour is often at odds with the objectives of this regime, and not surprisingly the analysis of the UNFCCC negotiations and the US position therein has been characterised by both controversy and complexity. As will be highlighted in the Literature Review section, the scholarship which investigates the US position in the UNFCCC tends to depend on either unit- or structural-level variables when analysing this research area (Keohane and Victor, 2010; He, 2010; Roberts, 2011; Bailer and Weiler, 2015; Weiler, 2012; and Fisher 2006), rarely has there been an attempt to combine and understand how the two levels of analysis impact this position. Numerous studies have also been either technical or economic studies (Pearson and Foxon, 2012; Fouquet and Pearson, 2012; Mediavilla *et al.*, 2013; Shaffer, 2009:18; Stoddard, 2013:1). There is also an insufficient understanding of how the historical development of US energy policy within these two levels interacts with the US position in the UNFCCC, and which offers decision-makers a set of conflicting objectives. Thus, there is a significant gap in the scholarship that this study wishes to fill in order to gain a more comprehensive understanding of the interaction between the USA's energy policy and its position in the UNFCCC.

Any attempt to understand the United States' position in the global climate change negotiations has to reckon with a number of contradictory options facing decision-makers as they attempt to design an energy and foreign policy, much of which is the result of historical

circumstances. In recent years, climate change mitigation[1] has become one of a number of competing policy objectives within energy policy thereby adding to this complexity (IEA, 2011:11). This is poignant since at the international level nations attempt to deal with the challenge of anthropogenic climate change while remaining economically competitive; thereby energy policy cannot be separated from broader foreign policy goals. Keohane and Victor argue that, "As a result of any nation's actions to reduce greenhouse gas emissions meaningfully, to secure reliable energy supplies, or to stabilise energy prices will be affected by the actions of many other countries." (2013:97; Yergin, 2012). As such, states occupy a central role in evaluating and meeting competing policy objectives at both the domestic and international levels. A historically detailed analysis can reveal important continuities but also differences in decision-makers' approach to these issues and the factors that led to their stance. This study aims to enhance our understanding of the challenges faced by policy-makers when making choices amongst contradictory policy goals and its interactions with their positions in international negotiations (Bailer and Weiler, 2015).

1.3 Research Aim

The overarching research aim of this interdisciplinary study is to understand the historical interaction between the USA's energy policy and its negotiating position in the UNFCCC for successive administrations. This study draws heavily on historical analysis and is guided by neoclassical realism as its theoretical framework to understand these dynamics. In order to better understand the interaction between US energy policy and its position in the UNFCCC this study explores how a combination of the structural-level, that is the distribution of power in the international system, and the unit-level, that is domestic factors, influence these two policy areas and to gain insight into how these two arenas interact.

Thus, understanding the balancing amongst competing policy goals is pivotal in gaining insight into these dynamics. While complementary and alternative explanations of state-energy relations exist in the literature[2], there is a limited understanding of the manner in

[1] Although climate change mitigation represents an extensive environmental challenge for governments to form consensus on, it is by no means the sole such challenge facing multilateral cooperation; with waste disposal, air pollution, inadequate access to water and coral reef degradation forming equally pressing challenges and depleting the global commons (First Carbon Solutions, 2019; Carbon Brief, 2011).

[2] These alternative explanations range from the lock-in and path-dependent effect of technological and institutional co-evolution (Foxon, 2002; Arthur, 1989; Walker, 2000; Unruh, 2000; Bekhout, 2002); regulatory framework (Jacobson and Lauber, 2006); socio-institutional factors affecting policy-making (Laird and Stefes,

which energy policy interacts with state behaviour within an international negotiating forum such as the UNFCCC.

1.4 Literature Review

The main focus of this interdisciplinary, historical research is the position of the USA in the UNFCCC negotiations and its interaction with US energy policy. Thereby, this literature review provides an overview of two related fields that are of importance to this study, namely: cooperation, or the lack thereof, in the UNFCCC, and which factors account for the USA's position in the UNFCCC. It further subdivides these two issue areas according to studies that can be grouped according to level of analysis, that is either the system- or the unit-level in discussing and synthesising scholarly work, and mainly focuses on the literature in IR. It then discusses the gap in the literature review, these being energy policy, and ideas. This interdisciplinary study is anchored theoretically in IR, but as will be explained later in this chapter, it also draws on concepts in the policy process literature.

1.4.1 Cooperation and the Global Climate Change Negotiations

The UNFCCC negotiations' historical impasse in the lead up to the Paris negotiations of 2015 draws much debate amongst scholars interested in interstate cooperation. The puzzle of interstate cooperation[3] is quintessential to IR, and numerous scholars (Keohane, 1982, 2016; Jervis, 1978; Grieco, 1988; Martin, 1992, Mearsheimer, 1994 – 1995; Young; 1989, and Krasner, 1976) endeavour to investigate what impedes or encourages this cooperation and the efficacy of international institutions in enhancing cooperation. In an attempt to understand the global climate change negotiations, many studies focus either on the unit- or the international-system as the level of analysis to account for states' positions and related outcomes therein, most never attempt to integrate and show the interaction between the two. In this regard, the publication of Robert Putnam's seminal 1988 article presented the following puzzle, "Domestic politics and international relations are often somehow

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2009); state-business relations and the structural influence of capitalism (Jacobsson and Bergek, 2004; Salamon and Siegfried, 1977; Markussen and Svendsen, 2005); and institutional as well as technological governance (Hisschemoller *et al.*, 2006)

[3] Since the 1960s, the internationalisation of environmental problems has become a prominent feature of the global agenda with a corresponding growth in multilateral cooperation and international regimes to solve this problem (Schreurs and Economy, 1997:5).

entangled, but our theories have not yet sorted out the puzzling tangle. It is fruitless to debate whether domestic politics really determine international relations, or the reverse. The answer to that question is clearly 'Both, sometimes.' The more interesting questions are 'When?' and 'How?'" To identify a plausible answer to this question has been a key problem for numerous scholarly endeavours. Fearon further elaborates on the influence that domestic politics exert on foreign policy and concludes that there are two principal ways in which domestic politics exert such an influence on states constrained by the structure of the international system, either i. if a state is taken to be a unitary, rational actor, a domestic explanation would identify a suboptimal foreign policy relative to a normative standard because of the interaction and interference of actors[4] within the state (1998:291); or ii. that within the structure of the international system, the particular characteristics of the state, besides its position in the hierarchy of power amongst states, determines its foreign policy (1998:292).

Within these dynamics, the global climate change negotiations are a multi-faceted process with an indefatigable set of themes that it covers from justice, power politics, poverty eradication, sustainable development, and regime effectiveness. Unlike other environmental problems, climate change is a unique problem, making it difficult for parties to form consensus. Scholars offer various explanatory frameworks for the stalemate in the climate change negotiations ranging from lack of political cohesion underpinned by conflicting national interests (Groen and Niemann, 2012; Vihma *et al*., 2011; Caparrós *et al*., 2004); political economy determinants especially related to the presence of energy-intensive industries in the economy (Steves and Teytelboym, 2013; Newell and Paterson, 1998:692); to institutional factors and diversity (Keohane and Victor, 2010; Heller, 1996); global inequality (Parks and Roberts, 2008); and alternate conceptions of climate justice (Fisher, 2012); historical responsibility (Friman and Linnér, 2008) and equity (Heyward, 2007). The negotiations have likewise been studied through a multitude of conceptual frameworks

[4] Within this framework, foreign policy objectives are not determined singularly by government officials but rather through the interaction between different actors, particularly those with vested interests (Katzenstein (b), 1977:892). Policy networks consisting of private as well as public sectors influence the objectives of foreign policy (Katzenstein (b), 1977:892). At times these interactions will be fused with state ideology (Katzenstein (b), 1977:892 - 893). Katzenstein further explains that, "The centralization of state and society and the differentiation between them affect the character of the policy networks and policy instruments." (Katzenstein (b), 1977:894). Different varieties of historically-developed domestic structures will influence the type of political strategies pursued by policy-makers in the international context (Katzenstein (b), 1977:907, 920).

ranging from the risk society thesis (Bulkeley, 2001); gender (Dankelman, 2002; Hemmati and Röhr, 2009), the role of state and non-state actors (Auer, 2000); private and state governance (Falkner, 2003), sustainable development (Sanwal, 2012); neo-Gramscian power relations (Levy and Egan, 2003), geopolitical divisions (Patterson and Grubb, 1992:310; Falkner, 2010; Terhalle and Depledge, 2013), and the division between the North and South wherein conflict of interest concerning socio-economic development and global inequality reflects different perceptions of justice and equitability, access to resources and development, as well as a redistribution of power and wealth in the global political economy (Huang, 2009:435 – 437; Roberts, 2001: 501, 503).

1.4.2 Structural Influences

As an introductory comment in their editorial introduction to the journal *Climate Policy*, Michaelowa and Michaelowa (2012:527 - 528), drawing on standard economic theory[5], write that since climate change mitigation, as a public good[6], is an example of a prisoners' dilemma wherein countries can benefit from others' mitigation efforts while not complying, there is an incentive to free-ride which makes it difficult for countries to cooperate since each fears being taken advantage of by others since the benefits from global emissions mitigation are both non-excludable and, non-rival. Keohane and Oppenheimer's (2016) investigation into this problem revealed that there are a number of issues that complicate multilateral cooperation related to climate change. From a realist perspective in IR, the anarchic structure of the international system means that there is no centralised authority capable of enforcing action and since climate change is a *public bad*, each country's contribution to the global problem will only inflict a limited amount of negative consequences to itself, thereby countries have an incentive to ignore the externalities of their decisions on others (Keohane and Oppenheimer, 2016:143). Further complicating these issues, is the notion of *burden-sharing* which is understood as referring to fairness and equity in apportioning the costs and

[5] It should be noted that while the definitions developed within economic theory are very valuable, the thesis will not be utilising the terms outlined in this sentence within the boundaries of economic theory, but rather, within the research aims developed in section 1.3.

[6] A public good has as its defining characteristics joint supply as well as non-excludability, and it is this excludability quality of a public good that promotes the free-rider problem (Conybeare, 1984:6). Even though work by economists on public goods has informed IR theorists' analysis of these, the thesis does not directly deal with public goods and instead the thesis is interested in relative gains within the context of the study.

benefits of implementation within the negotiations (Keohane and Oppenheimer, 2016:143). Keohane and Oppenheimer (2016:144) thus suggest that cooperation between states is impeded because of the high costs involved wherein states can be disadvantaged if other countries do not comply with the agreement.

Writing from a neorealist perspective, Grundig (2006) assesses the impact of relative gains concerns on international environmental cooperation. Relying on comparative statistics within an n-actor game model of three issue-areas in international environmental cooperation consisting of ozone depletion, international trade and climate change, his study demonstrates that when the relative gains within such negotiations are big enough to be security relevant, cooperation is impeded and in contrast cooperation increases where relative gains concerns are small resulting in varying degrees of compliance amongst states within each respective issue area (Grundig, 2006:782). Grundig (2006:798) concludes that "The model suggests that we should see less cooperation in the case of global warming than in the case of ozone depletion, as in the latter case there is no relative gains concern due to the fact that the economic impact is not significant for a states' security, while there is such an impact in the former case." In international negotiations, the issue area matters and states will be concerned over the degree to which cooperation will impact their security.

Presenting an alternative to realist theory that he refers as to institutional bargaining, Young (1989:350, 352, 359) criticises its assumption that the distribution of power in the international system accounts for collective outcomes wherein international regimes merely correspond to the interests of powerful states, especially hegemons, who are necessary for the creation of regimes. Yet, many studies negate Young's criticism. The changing structure of the international system, based on states' material power positions, has influenced their positions, alliance formation and cooperation. Roberts' analysis of the US position in recent climate change negotiations argues that from a World Systems Theory (WST) perspective the USA's participation in the negotiations and its inability to secure an agreement, can be attributed to its economic and political decline in relation to China, which occurred in the context of the fragmentation of developing countries and the weakening of the European Union (2011:776). The negotiations were thus fragmented as a result of increasing multipolarity, and competing notions of justice that were debated between developed and developing countries (2011:779). Keohane and Victor (2010:1), incorporating a liberal institutionalist perspective, indicate that part of the challenge of governing the limitations of the effects of climate change is that there is no integrated, comprehensive regime for this

purpose. Instead, there exists a regime complex, which is a set of unintegrated yet connected regimes to manage the governance of the effects of climate change (Keohane and Victor, 2010:1). This regime complex is likely to endure without the emergence of a comprehensive regime because of the differences in state' interests over this issue area (Keohane and Victor, 2010:1, 3).

A structural perspective has likewise been used by He (2010:6) to analyse China's increasing influence in the UNFCCC negotiations which is attributed to its rising status in the international system. China's climate change diplomacy has now become a key component of its foreign policy because of the issue's global strategic significance. Domestically, the issue has been linked to the need to facilitate fundamental changes in the pattern of development while internationally; Chinese ascent translates into increased participation in the shaping of the international environmental regime and to exert more influence over the rules of international affairs. As a result, a two-level game ensues wherein China had to balance between its domestic pressures and international ambitions (He, 2010:6 – 7, 10). Likewise, Hallding *et al.* (2013) have pointed out that the Brazil, South Africa, India and China (BASIC) countries' cooperation in the climate change negotiations is based on their shared identity as developing countries who are concerned about their socio-economic development and the potential limitations that an acceptance of ceilings on GHG emissions will have for their ability to develop in a carbon constrained space. Therefore, studies that analyse the structure of the international system agree that a lack of enforcement authority, non-compliance as well as cheating, and the high costs and disadvantages involved in the UNFCCC negotiations limit cooperation therein while states' positions in the international hierarchy will influence their position in the negotiations. Overall, studies agree that what impedes cooperation is a lack of a central authority in accordance with a structural explanation.

The Paris Negotiations were an important watershed moment in the history of the global climate change negotiations, and per consequence multilateral cooperation. Andresen *et al.*, (2016) analysed the effects of international institutions and the extent to which they contribute to problem-solving effectiveness by analysing the possible impact on the EU and international carbon markets through process tracing. Their analysis highlights that the Paris Agreement has the potential to increase countries' mitigation ambitions. Young has a more cautious approach, arguing that the INDCs that were developed towards the Paris Negotiations are insufficient in preventing the 1.5 degrees Centigrade rise necessary to avert

catastrophic climate change. As such it is necessary to find the means to enhance ambition to prevent further temperature rise (Young, 2016). Bernauer *et al.*, (2016) observe public opinion surrounding domestic constraints and uncertainty and the possibility that public opinion impacts public policy within an empirical study on China. Their analysis highlights that, "The main policy implication we can draw from this evidence is that, to the extent the Chinese government is interested in pushing ahead with ambitious and thus costly GHG reduction policies, it should be able to leverage segments of public support in order to overcome domestic obstacles to GHG mitigation policies" (Bernauer *et al*., 2016:161).

1.4.3 Unit-Level Influences

Since the international system lacks a central authority that is capable of forcing states to adopt environmental protection measures, states adopt different policies to regulate environmental problems (Sprinz and Vaahtornta, 1994:77). Sprinz and Vaahtornta (1994:78) suggest that such variance is the result of interest-based explanations, defined as the factors found at the sub-national level, in this instance, these being the economic costs of pollution abatement and the level of a state's ecological vulnerability towards pollution, rather than the position that a state occupies on the international hierarchy which is the traditional view of a structural explanation. Their study indicates that in the negotiations for the Helsinki and Montreal Protocols, countries positions' are further differentiated by civic attitudes towards the environment, industry lobbying, ecological political parties and the significance of environmental support for electoral victory in certain countries (Sprinz and Vaahtornta, 1994:104 - 105)

If the UNFCCC negotiations have been marked by stalemate for the span of their duration, Dai (2005) takes an alternative view by analysing what leads to successful compliance in international environmental regimes. He investigated a case study of the Long Range Transboundary Air Pollution (LRTAP) Convention which was established in 1985 amongst twenty-one European countries to reduce their sulphur emissions by 30% by 1993 (Dai, 2005:363). Although these efforts presented a classic collective action problem because of the concentrated costs and diffuse benefits that would be distributed with the potential that states will free-ride, his line of argument is that a two-level game ensues where divergent sets of domestic actors that are set to either gain or lose from compliance place pressure on central decision-makers to pursue their interests in the negotiations (Dai, 2005:363). In this instance, those actors that could gain because of compliance were able to exercise leverage over policy-makers and as a result "compliance can be rational even if the country as a whole pays

for it more than benefits from it" (Dai, 2005:364). The distribution of power in society matters since environmental agreements entail a distribution of costs and benefits across society, distributive politics will play an important part in determining to what degree and how environmental agreements will be endorsed and complied with. Under such circumstances, there is no straightforward formula towards determining compliance nor are different stakeholders' positions necessarily static. Thereby, Goldstein (1996:541), investigating the dispute-settlement procedures contained within the North American Free Trade Agreement (NAFTA), argues that a neglected aspect of the two-level game literature, is that domestic groups often compel states to join international regimes in order to advance their particular interests with which, "Here, the answer to a commonly asked question of why nations would agree to specific rules of international conduct is that these rules present a solution to a domestic problem."

Although the area of cooperation and regime effectiveness is of importance to the analysis, this research is more interested in the factors that lead states to adopting a particular position in multilateral negotiations. While studies analyse how to enhance cooperation (Keohane and Victor, 2010; Bagozzi, 2015), other scholarly endeavours attempt to understand why states have particular negotiating positions (Bailer and Weiler, 2015), and how this enhances or limits cooperation. Bailer's study (2012; see also Bailer and Weiler, 2015; Weiler, 2012) used a quantitative approach, with the aid of negotiation analysis to discover why certain strategies were used by various governments during the UNFCCC negotiations in Copenhagen. Regime type and economic power are often found to account for states' negotiating positions alongside interest group pressure which forms an important intervening variable that can alter a state's negotiating position (Bailer, 2012:535). His findings suggest that states which are democratic tend to be more cooperative and are less likely to use a hard negotiating strategy (Bailer, 2012: 546). Nonetheless, with increased pressure from domestic interest groups, democratic states are more likely to become less cooperative and use hard negotiation strategies (Bailer, 2012: 546). Therefore, a state's political economy and political system bear an influence on the position that it adopts within the UNFCCC. While broad in its scope, such a study negates important cross-country differences by relying on such a large n-case study. While this research helps explicate states' positions in the climate change negotiations, it tends to ignore critical variables related to a country's political economy and the resulting costs and benefits that the redistribution caused by mandatory mitigation policies will incur.

1.4.4 Climate Change and Environmental Politics: Interplay of Structural- and Unit-Level Influences

In the US context, Robert Falkner has provided the most sophisticated and integrated attempt to explain the USA's foreign environmental policies and the dual influences of its position in the international and domestic systems. Falkner suggests that the shift in the USA's environmental leadership of the 1970s and 1980s is indirectly attributed to its hegemonic position within an international system that has changed from a bipolar to a unipolar structure (Falkner, 2005:585). He points out that since the 1992 UNCED conference, US foreign policy has become "hostile" to the enforcement of stringent environmental controls (Falkner, 2005:585). However, Falkner argues that US hegemony plays an indirect role in its pursuit of foreign environmental policies, rather direct influences can be found in domestic sources within the interplay between domestic interest groups and the fragmented US political system, thus combining state-society, state structure and a government bargaining model (Falkner, 2005:586, 593). In particular, the federal structure of the US system leads to "deadlock between competing institutional interests" and the ability of the United States to accede to international environmental agreements (Falkner, 2005:593). A second variable that Falkner identifies is pluralist interest group politics whereby, "Because of the openness of the foreign policymaking process and the active involvement of domestic interest groups in the environmental field, the US role in global environmental politics would be incomprehensible if nonstate actors were not taken into account." (Falkner, 2005:594).

Although it is more developed than other studies, there are a number of shortcomings to his approach. Falkner adopts a broad understanding of environmental issues whereas climate change is a far more complex and nuanced environmental problem than those of earlier eras. In earlier decades, the US had far more stringent environmental laws relative to other countries, so it was in its interest to enforce stringent environmental treaties. Secondly, even though he gives significance to domestic factors, his analyses glosses over many of the contradictions and nuances of US involvement in environmental negotiations and negates many of the differences between administrations.

There are studies which have investigated how US climate politics at the unit-level have influenced its position in the UNFCCC negotiations (Fisher *et al*., 2013:524). Most scholars agree that the federal structure of the US political system influences its domestic and international climate policies (Jones, 1991; Farber, 2008; Selin and VanDeveer, 2009).

Christiansen's (2003:350 – 356) study found that US climate policy was impeded by a combination of factors which he identified as the federal structure of the US political system and its separation of power; cost uncertainty referring to the uncertainty that activities aimed at reducing GHG emissions will have on the US economy; scientific uncertainty; and the role of interest and lobby groups which have a more ambiguous role with some companies strongly resisting the abatement of GHGs while others support such measures. By contrast, Selin and VanDeveer (2007:17, 22) identify climate policy-making at the state and municipal level as influencing increased federal-level policy-making on climate change which will be modelled on existing sub-national policies through networked actors who influence policy making by policy diffusion and learning, and demonstrating the feasibility of the policies, thereby identifying the sources and change of US foreign policy at the sub-national level. A study by Fisher *et al.* (2013:525) analysed how Congressional politics contributes to climate change policy in the US using network analysis by identifying coalitions of actors who have similar policy core beliefs, otherwise known as ideological networks (Fisher *at al.*, 2013:230). This revealed how over time positions towards climate change in the US Congress shifted by identifying emerging cliques that alter in terms of supporters and opponents of climate change policy (Fisher *et al.*, 2013:537). Over time, ideological networks have changed in the US Congress towards climate change with a move beyond the traditional bipartisan divide over climate change (Fisher *et al.*, 2013:537 - 538). Vezirgiannidou (2013) employed framing, which is defined as alternative "ways of presenting the problem" as an analytical framework to understand the interaction between various policy goals in US energy policy wherein decision-makers "framed" climate change to influence the policy process by presenting it as an issue connected to energy security and economic growth in order to increase constituent support. This is however a problematic approach. At the rhetorical level, all administrations claimed that they supported climate change as an environmental, energy security, and economic growth issue, while Congressional, as well as federal, politics have ebbed and altered in their support for climate change over time. Overall, Lutzenhiser (2001) identified resistance stemming from Congress and powerful vested interests as impacting these policy efforts.

While the afore-mentioned studies focused singularly on factors at the domestic, or unit, level in influencing US policies towards both domestic climate policy and the UNFCCC, a number of studies have used Putnam's two-level game to examine the United States' position in the global climate change negotiations to indicate how President George W. Bush used the

USA's political climate to legitimate his unilateral and hawkish approach in international relations which included climate change (Downie, 2013; Lisowski, 2002; Sprintz and Weiß, 2001). These studies emphasise the influence of different actors at the domestic level in influencing the executive, whether departmental, and bureaucratic actors (Downie, 2013) or vested interests (Lisowski, 2002). Problematically these studies are often inconsistent in their analyses and emphasise domestic level variables while leaving unanswered questions concerning the influence of the international system on countries' negotiating positions. The USA's refusal to ratify the Kyoto Protocol has been attributed to Bush's particular foreign policy that is based on leadership understood as "going it alone" whereby his administration differentiated itself from the Kyoto model by designing what they perceived to be a more realistic and pragmatic alternative (Eckersley, 2007:315). This foreign policy stance was pursued even more strongly because of the particular energy policy that the Bush administration wished to enact, one that was strongly supportive of increasing domestic fossil fuel production in the midst of concerns that efforts to mitigate climate change would increase the price of US energy and have negative ramifications for the strength of the US economy and the international competitiveness of US industries.

In this regard energy, specifically the USA's dependence on fossil fuels, its natural resource endowment and its energy infrastructure, has played a major role in constraining its domestic and foreign climate policies (Fisher, 2006:469). It has been difficult to change US energy policy in spite of a generally agreed need to reduce US dependence on petroleum (Bang, 2010:1645). There is a disagreement amongst scholars about this issue area. This policy impasse is attributed to the role and design of institutions, the ideological gridlock within the separation of power and resistance to a transition away from fossil fuels for economic reasons (Bang, 2010:1645, 1647). Byrne *et al.* (2007) account for the differences between state and federal level governments' support for energy and climate policies. They trace these divergences to the structure of the US federal system which at the federal level allows vested interests greater access to and input into the Congressional policy-making process; while at the state level, direct citizen access allows civic attitudes to influence support for climate and energy policies; as well as policy-makers' perception of the economic benefits of enacting such policies at the state-level (Byrne *et al.,* 2007:4566 - 4568). Nonetheless, this is still puzzling as this does not indicate why state-level support has not trickled-up to the federal level in spite of wide-spread support for climate change policies and mitigation. To illustrate this, Lowry (2008) studied the difference between energy policy and environmental policy in

the US context and claimed that the former incurs a greater distributive effect than the latter, which produced different policy outcomes (2008:1196). He concludes that different policies produce different kinds of politics, and that such changes result in different kinds of politics and policy outcomes (Lowry, 2008:1196).

1.4.5 A Discussion of the Role of Energy Policy

Although examining a different country, one analysis that offers a different explanation relates to the securitisation of energy resources, and their perceived costs and benefits. In the pursuit of competing policy priorities, Michaels and Tal (2015) found that Israel moved away from its climate policy with the discovery of natural gas reserves which shifted the calculus on climate change mitigation and potential economic gains. Such trade-offs are embedded in decision-makers' perception that energy security essentially entails a continuous supply of fossil fuels which undermined mitigation in favour of fossil fuel production and economic growth within an altered energy profile (Michaels and Tal, 2015:480 – 481). This showcases the difficulties involved in implementing a comprehensive climate and energy policy in view of competing policy priorities (Michaels and Tal, 2015:481). Thereby, in the hierarchy of policy goals, energy security undermines climate change (Michaels and Tal, 2015:484).

At both the local and global level, energy and national interest intersect (Wirth *et al*. 2003). Energy is a critical input of economic processes and is essential to economic and social development making it a crucial input for the realisation of sustainable development, ranging from the alleviation of poverty to the limitation of environmental degradation (Bohi and Toman, 1996; Nussbaumer *et al*., 2013:101). This results in the close relationship that exists between the state and the energy industry at the domestic level, which allows the state to assimilate an interventionist role in energy policy in order to maintain energy security (Helm, 2002:174; Helm, *et al.*, 1988; Raman, 2013). However, the role of the state and its policy objectives in this policy area have altered over time.

While various authors offer a number of explanations for the climate change negotiations' impasse, energy policy remains an underexplored variable within most analyses. Nussbaumer *et al*. (2013:101) argue that the energy system is facing two major challenges, these being "the need to ensure the supply of affordable and reliable energy while at the same time drastically curbing related greenhouse gas (GHG) emissions. Those issues are intrinsically intertwined." However, most studies that analyse these challenges focus on technological and economic problems and solutions to climate change and energy security (Krey and Clarke,

2011:1131, Kim, 2014; Kerr, 2007; Heller, 1996; Lilliestam *et al*., 2012; Hübler and Steckel, 2012; Cherry *et al.*, 2014:562; Alquist and Guénnete, 2014; Zhang *et al.*, 2014; Mah *et al*., 2013; Wittmann; 2013). While such studies make an important contribution, they pay insufficient attention to the historical context that these issues are embedded in and that offer a set of opportunities and constraints to these problems and solutions.

Recent scholarship has thus begun to pay closer attention to the connection between the goals of energy security and climate change (mitigation) in energy policy (Cherp *et al*., 2013). While some scholars argue that there may be overlap between energy security and mitigation policies, especially in the area of innovation (Kim, 2014), the precise role that renewable energy might play in climate change mitigation is highly uncertain while its precise role in enhancing energy security also remains unclear, although in the long-term, well-designed policies which reduce the dependence on fossil fuels by diversifying technology and fuel choice can improve energy security (Krey and Clarke, 2011:1132; Trainer, 2013; IEA, 2007:13). While the production of cheap natural gas through hydraulic fracturing was a key policy driver a few years ago, in recent years, energy policy has been influenced by the decrease in renewable energy prices which has emerged as a key policy driver towards decarbonisation globally (IRENA, 2018:4). An important contribution was made by the World Energy Council who developed the concept of the energy trilemma, defined as the management of three related aspects of energy systems: energy equity, environmental sustainability and energy security (World Energy Council, 2019:11). The ability to achieve the necessary coherence between these aspects requires the cooperation between social and economic factors, governments and private organisations as well as natural resources and consumer behaviour (World Energy Council, 2019:11).

A recent study by Kropatcheva (2014) which focuses on Russia's energy weapon and power as a case study has argued that states' energy choices must be situated within a broader global context whereby technological breakthroughs and the introduction of new energy commodities, such as shale gas, are beginning to impact and transform global energy relations and policies. This highlights that the deliberations on the trade-offs between various domestic and foreign policy goals would be problematic, complex and bound by a political process. Shaffer points out that "energy and politics are intrinsically linked. A country's ability to access energy supplies and the ways in which it uses energy crucially determines the state of its economy, its national security, and the quality and sustainability of its environment." (Shaffer, 2009:1). Yet, this important area of interaction remains understudied

in Political Science and International Relations (IR) – especially in terms of the wider implications that this interaction has for multilateral negotiations (Shaffer, 2009:18). Per consequence, this area of investigation remains limited when applied to the sphere of the global climate change negotiations. Most studies that link the climate change negotiations to energy policy are principally technical and economic studies or if they do this, it is done very weakly and quite rarely (Pearson and Foxon, 2012; Fouquet and Pearson, 2012; Mediavilla *et al.*, 2013). Yet energy policy consists of multiple, and often contradictory goals and, as will be highlighted in the thesis, it is not clear how decision-makers make sense of these.

To some degree, most scholars have agreed that the US policy process and associated outcomes are determined by the federal structure of US politics. Moreover, their studies indicate that at the unit-level, it is difficult to separate independent variables, with most studies emphasising a multi-causal interaction of factors as influencing US domestic and foreign policies. Moreover, studies are divided over the effects of the incursion of vested interests (Falkner, 2005; Lutzenhiser, 2001) or ideological gridlock (Fisher *et al*. 2013) in influencing policy outcomes. While providing a beneficial analytical perspective, nevertheless, over the last three decades a number of studies have recognised that subjective beliefs can form important causal mechanisms in political outcomes, whether at the international or domestic level. To understand the role of ideas, advances in this regard have been made in the policy process scholarship. At this point, it is important to emphasise that this study is theoretically grounded in IR but has contributions added to its theoretical framework through the emphasis on policy goals and the importance of ideas from the policy process scholarship which the following section elaborates and which are understood within the parameters of the discussion thus far.

1.4.6 The Policy Process Literature

The policy process literature focuses mainly on factors found at the unit-level which bear an influence on domestic policy outcomes. While recognising the importance of a variety of factors in influencing the policy process and outcomes, the process of policy change is an ambiguous one, and early scholarship argued that policy changed as a result of social pressure wherein governments formulated policy merely in response to social conflict (Bennet and Howlett, 1992:275). In contrast, a new stream of scholarship emphasised the role of ideas in influencing the policy process offering a stronger analytical ability than traditional social conflict-based theories (Bennet and Howlett, 1992:276).

Policy-makers' ideational prisms, consisting of ideas and ideology, help to influence the policy process by establishing "road maps" which guide a course of action, by limiting policy options once they are institutionalised, and by influencing the interactions amongst policy-makers (Howlett and Ramesh, 2003:126 - 127). These ideas help to determine the type of goals and instruments that a policy will consist of as well as the nature of the problems that these must deal with (Hall, 1993:279). In parallel, the concept of the policy paradigm shift was introduced by Peter Hall in his seminal 1993 article in order to indicate how ideas dominating particular policy paradigms influence policy change (Hall, 1993; Kern and Kuzemko, 2014:513; Baumgartner, 2013:239). In his reference to the philosopher of science, Thomas Kuhn, Hall indicates that first and second level change correspond to normal policymaking, that is change that does not challenge the overall terms of a policy paradigm; while third order change is different in that it exhibits a radical alteration in the overall terms of policy (Hall, 1993:279). From an analytical point of view, by identifying the different kinds of policy change, it is possible to locate these changes relative to one another (Hall, 1993:279). Thus, radical shifts in a *policy paradigm* accompany alterations in three related areas of policy: (i) the instrument settings, (ii) the policy instruments and (iii) the hierarchical order of policy goals[7] (Hall, 1993:279).

Jones and Baumgartner (1993), while having a similar thesis, highlight the impact of "the interaction of the "venues" of political authority and the "image" of the policy, or the ideas associated with it" and discuss rival policy "images" in a similar vein to Hall's idea (Baumgartner, 2013:240). Other studies would emphasise the interaction between perceived interests, institutions, and ideas in order to indicate how actors' interests are influenced during the policy process (Béland, 2009). However, policy paradigms are not merely static frameworks that influence the policy process and result in policy outcomes in a reductionist manner (Béland and Cox, 2013). Instead, Béland and Cox (2013:193) argue that,

> "…policy paradigms have been studied for representing more than fads or fashions. For these scholars, policy paradigms embody political struggle, specifically, the struggle among competing ideas (and the actors carrying them) about how best to address policy problems. How paradigms grow in popularity, how they endure, and how they are supplanted by new ideas are

[7] For the purpose of this study, the main focus will be on policy goals. Policy instruments will not be investigated as these are outside the scope of this particular study and will only be mentioned occasionally.

> known to represent the changing political fortunes of powerful actors in a society…to highlight the study of policy paradigms as a way to understand power and the role of ideas in policymaking."

Although in this perspective, the process of decision-making is multifaceted and is influenced by cultural, economic, political and social factors, the distribution of power among participants in the decision-making process and their ability to influence both decisions and non-decisions is integral to understanding policy outcomes (Bachrach and Baratz, 1963:632; Bachrach and Baratz, 1962:947 – 948; Arts and Van Tatenhove, 2004). Lasswell and Kaplan (1950:75) note that, "the concept of power is perhaps the most fundamental in the whole of political science: the political process is the shaping, distribution, and exercise of power". Power is thus the pervasive feature and common denominator of both domestic and international politics, but it is distributed differently in the two spheres.

The scope of the literature review has provided an overview of many studies that have contributed to our knowledge of states' positions in the global climate change negotiations, as well as the factors that influence policy outcomes within the domestic and international settings. However, there are two serious oversights in these scholarly endeavours that this study wishes to explore. While the literature has highlighted various dynamics of the climate change negotiations it has insufficiently linked these emergent trends to the socio-historical development of energy policy as a configuration of the material and ideational. Nor have these studies consistently analysed the interaction between two levels of analysis. It is argued here that understanding states' response to the changing trends within their energy policies will assist in understanding states' positions within the UNFCCC negotiations[8]. Over the last twenty years concerns over climate change have required that policy-makers face trade-offs in their attempt to find a solution to these two processes. Because energy policy must achieve a number of contested goals leading to a hierarchy of policy priorities, the mitigation of climate change may be subsumed by competing objectives seen as the foundation for social and economic well-being (Frei, 2004:1253). In addition, studies focus on short time frames in their analysis of US climate policy and its position within the UNFCCC which often leads to limited conclusions. By undertaking a historical study, this research can trace the development of US energy policy and its position within the UNFCCC, and thereby be able

[8] States' negotiating positions are considered along political objectives and national interests (UNFCCC, 2006:49).

to better contextualise the interactions between the two policy areas as well as indicate continuity and change amongst successive administrations' stance towards these policies.

1.5 Theoretical Framework

The analytical framework[9] adopted by this study belongs to the realist[10] tradition[11] in International Relations, and more specifically Foreign Policy Analysis (FPA) to account for the particular foreign policy decisions of states using general theoretical assumptions (Wohlforth, 2012:42; Hudson, 2005:1). FPA operates at a level of analysis that is concerned with analysing the motives of state behaviour, and thus combines international and domestic factors to understand such outcomes (Hill, 2003:7 - 10). Hudson and Vore (1995:210) thus argue that, "In effect, FPA provides an alternative to the "black-boxing" of the inner workings of nations common to actor-general theories. It unpacks the box by examining foreign policy decision-making. In effect, FPA takes a foreign policy decision-making approach to the study of IR." While a number of strands of realist thought exist (Walt, 1998), this work argues that it is neoclassical realism, as a variant of the FPA approach, which is the most optimal approach in analysing outcomes in international climate change negotiations and energy policy which will be further elaborated on in chapter two.

Gideon Rose argues in *Neoclassical Realism and Theories of Foreign Policy* (1998) that neoclassical realism, in juxtaposition to neorealism, takes into account both the internal and external variables in its explanation of state behaviour (Rose, 1998: 146). Neorealism, as

[9] Although this is not its focus, this scholarship has the potential to contribute to neoclassical realism as a theoretical framework and wishes to understand how a theoretical framework which is focused on traditional security threats makes sense of new trends such as climate change.

[10] Most thinkers who identify themselves with this theoretical framework have in common their emphasis on the power struggle amongst states as determining the outcome of international relations and are predominantly pessimistic with regards to the elimination of conflict amongst states.

[11] While the thesis makes use of neoclassical realism, it should be noted that since this is an interdisciplinary, historical study, its use of neoclassical realism is different to the way that this theory is employed in more traditional IR studies. That is, the use of this theory is carried out within a historical study and crucially since neoclassical realism represents a relatively recent analytical framework, scholars have used it in different ways to suit the aims of their studies, and moreover scholars such as Mastanduno (1991) and Kropatcheva (2014) have used it within qualitative analyses.

described in Kenneth Waltz's[12] classic *Theory of International Politics* (1979), states that it is essentially the structural influence of the international system which accounts for state behaviour (Donnelly, 2009:36). Waltz further specifies that it is the combination of anarchy and hierarchy in the international system that assembles the roles and positions of states therein thus erasing qualitative differences amongst them (Donnelly, 2009:36). The main differences between states within such a system are that of capability instead of function creating a hierarchically ordered distribution of capabilities (Donnelly, 2009:36-37). Accordingly, states are differentiated according to their power within such a system (Gilpin, 1988:591). This creates the condition of self-help that marks the international system, where states can only count on themselves for the achievement of their goals, since there is no overarching body that can provide them with this assistance (Donnelly, 2009:36). Neoclassical realism criticises neorealism's emphasis on systemic variables as the sole explanatory variables of state behaviour as such an approach negates how policy-makers interpret these systemic pressures which are bound to be differentiated from one state to another.

Neoclassical realism posits that foreign policy is motivated firstly, by a state's position in the hierarchic international system and the relative material power capabilities that it possesses and secondly, the influence of its power capabilities on foreign policy needs to be analysed by understanding how systemic pressure is interpreted through intervening variables at the unit-level understood to be domestic state structures and the perceptions of policy-makers (Rose, 1998: 146). Relative power capabilities thus constitute the boundaries of a state's foreign policy according to this mode of thought (Rose, 1998: 146). Neoclassical realism therefore argues that it is necessary to examine the strength of the state *vis-à-vis* society "because these affect the proportion of national resources that can be allocated to foreign policy." (Rose, 1998:147). The consequence of this is that states that have similar capabilities but diverse state structures will likely act differently on the international stage which requires a careful examination of the context within which foreign policies are created and carried out (Rose, 1998:147). States' changing capabilities are used by neoclassical realists to understand the changing nature of "policymakers' perception of external threats, interests and opportunities." (Rose, 1998:156). Although critics argue that it is not as parsimonious as

[12] Although the thesis is aware that Kenneth Waltz is a neorealist, in those sections where there is a structural-level analysis, the thesis will cite Kenneth Waltz to develop the theoretical insights in the structural-level analysis section as well as the neoclassical realist framework.

structural realism (Legro and Moravscik, 1999), by emphasising the role of internal variables, and state-society structures, neoclassical realism can offer a richer, more historically accurate analysis of state behaviour. While there is the risk that variables are integrated in an arbitrary manner, a careful consideration of the influences on the subject matter being investigated permits the study to have a coherent approach to its analysis. This will be expanded upon in chapter two.

While the thesis as an interdisciplinary study draws upon the policy process literature, a brief reference will be made to three theoretical frameworks in the policy process literature and the rationale for not using these within the thesis. Public choice theory explains political behaviour through the application of principles embedded within neo-classical economics (Howlett and Ramesh, 2003:22). This model contends that political actors act rationally to "maximize their 'utility'" and are influenced by self-interest in their decision-making related to public policy making (Howlett and Ramesh, 2003:22 – 23). On the other hand, actor-centred institutionalism posits that political institutions are relatively insulated from the social context in which they are embedded and are furthermore guided by norms, rules and principles in determining their behaviour (Howlett and Ramesh, 2003:29). The state is therefore influenced by the establishment of government institutions and the historical progress of this institutional arrangement, which influence and limit future decisions (Howlett and Ramesh, 2003:29). A nuanced view is provided by principal agent theory which seeks to understand the reasons for policy failure where a gulf between the original political aims and subsequent administrative behaviour was evident in policy implementation (Howlett and Ramesh, 2003:191). The division between the aims of policy designers and the actual implementation by administrators arises from a complex interplay of factors such as intergovernmental collaboration and the autonomy of regulators when dealing with a particular policy problem and likewise the nature of the policy, all of which affect outcomes in a particular context (Howlett and Ramesh, 2003:191 – 192). While these theories provide invaluable insight to comprehending the public policy process, the study wishes to understand the interaction between international negotiations and a particular policy domain, in this case, energy policy, rather than understanding the policy process *per se*.

While other approaches are valuable and can provide important insights, neoclassical realism was chosen as it could analyse the complex nature of the study under investigation, these being both the UNFCCC negotiations as well as energy policy. While neoclassical realism is anchored in IR within the overall context of realist theory, it is still sufficiently adaptable to

include unit-level variables, which would permit the study to achieve better insight into the interaction between US energy policy and its negotiating position within the UNFCCC process by investigating the influence of both structural-, but also unit-level variables. Thereby the thesis would gain a more comprehensive overview of this interaction. The thesis further relied on neoclassical realism as it is more appropriate to be used within qualitative and historical research (Ripsman, Taliaferro and Lobell, 2016:109, 110). Since neoclassical realism is a theoretical framework that emphasises the importance of structural-level factors, that is the distribution of power in the international system, in influencing policy outcomes, this gives it an advantage *vis-à-vis* theories that predominantly emphasise domestic factors in influencing such outcomes (Taliaferro *et al.*, 2009:7). However, it has an added advantage over neorealism in its incorporation of unit-level variables within its analysis allowing this theoretical framework to be more nuanced, but simultaneously by placing emphasis on the structural-level it is able to show the complex interaction between the two levels, unlike constructivism which emphasises the role of ideas to a much greater extent (as, in fact, being constitutive of social reality), but neglects the role of material and structural power, as well as liberal institutionalism and its incorporation of the societal influence (Taliaferro *et al.*, 2009:289 – 290, 293 – 294). This offers neoclassical realism an advantage *vis-à-vis* these alternative theoretical frameworks and permits a more comprehensive and nuanced understanding of the subject matter being analysed.

1.6 Research Design and Methodology

The plurality of studies that have examined the complex interactions between energy policy and the UNFCCC negotiations have been for the most part exclusively economic or technical studies that tend to ignore historical path dependence, socio-political variables and have likewise focused on quantitative methodological approaches to the collection and analysis of data (Pearson and Foxon, 2012; Fouquet and Pearson, 2012; Mediavilla *et al.*, 2013; Shaffer, 2009:18; Stoddard, 2013:1). By contrast, the purpose of this research is to consider how energy policy interacts with the US position in the UNFCCC negotiations which will be studied by employing the theory-guided case study method (Bennett, 1996; Odell, 1996; Levy, 2008). To fill this research gap and supplement previous studies, this methodology is based on a qualitative approach towards data analysis in order to study "*cases as wholes"* wherein context and history play a strong analytical role which leads to "highly detailed description" (Lim, 2010:18; Mouton, 2012:154). In Rose's article he argues that the work of neoclassical realists shares a commonality in that they assume a common independent

variable which is *relative power*, and utilise a specific methodological approach consisting of historical analysis (Taliaferro *et al.*, 2009:7).

Qualitative research is guided by a particular methodological approach that is made up of a set of methods which conform to a certain logic (Babbie and Mouton, 2008:270). Thus, what is referred to as qualitative research[13] is an "umbrella term" which consists of a number of approaches within this framework (Holloway and Wheeler, 2002:3). Qualitative research methodology strives for in-depth description and an interpretive understanding of the phenomena been studied and to understand these processes within their specific historically-bounded context (Babbie and Mouton, 2008:270, 273, Holloway and Wheeler, 2002:8). Per consequence, description has to be rich and detailed and gain an understanding of actions and events within their context (Babbie and Mouton, 2008:271). Qualitative research has certain advantages because it reduces the likelihood of "data-induced measurement error" through the use of rich description making it possible to reduce simple coding error which is more likely in large-N statistical databases (Odell, 1996:75; Mahoney, 2007:128). Although realism falls within the positivist methodological approach, for the purpose of this study, following Kropatcheva (2014), this study employs neoclassical realism within a qualitative, historical approach whereby the study does not focus on proving a causal relationship between dependent and independent variables nor testing hypothesis but instead the emphasis is on exploring interactions and mutual influences within an interdisciplinary study. To gain insight into these dynamics, this interdisciplinary, historical study is theoretically based in IR but draws on concepts from the field of policy studies to better understand this complex terrain alluded to above. The case study[14] research strategy is beneficial for the investigation of complex social phenomena like the historical development of energy policy and associated outcomes in international negotiations (Yin, 2003:2). While case study research is widely used, there is no single definition of the concept *case study* (Levy, 2008:2). For the purpose of this study, a *case* can be defined as "an instance of a class of events or phenomena..." (Odell, 1996:66).

[13] According to Kawulich (2004:96) qualitative data analysis involves the search for patterns and themes to emerge out of the data and the establishment of relationships between these (Miles and Huberman, 1984:216).

[14] The use of qualitative research methodology in the case study analysis will result in the data that is collected to be of a textual nature as opposed to numerical data that is intrinsic to quantitative research methodology. Differences between qualitative and quantitative methodological approaches can also be traced to philosophical assumptions and the research methods related to the collection, analysis as well as interpretation of data (Cresswell, 2009:176).

Although analysts apply different terms to the variety of cases available, this study makes use of the interpretive case study (Lijphart, 1971:692), also known as the theory-guided case study[15] (Levy, 2008:4). For the purpose of this research, the focus will be on understanding a particular case and interpreting a defined phenomenon rather than attempting to generalise (Levy, 2008; Lijphart, 1971:692). The strength of this approach is that it allows for an improved understanding of the most important issues characterising the phenomenon (Levy, 2008:5). While a theoretical contribution is not the focus of this case study, it uses an existing theoretical framework to improve our knowledge of a *particular case* and by guiding empirical analysis and formulating the research questions (Lijphart, 1971:692; Mearsheimer and Walt, 2013:429; Levy, 2008:2). Although the concern is that it is not possible to draw general conclusions from a single case, the advantage of the case study is that by allowing the researcher to do an in-depth investigation of a phenomenon, it allows for the emergence of general propositions (Lijphart; 1971:691; Mearsheimer and Walt, 2013:429, 430). There are therefore three interconnected aspects that will be discussed in the rest of this section: the use of theoretical analysis within the case study method, historical analysis and analytic eclecticism.

Since historical analysis is integral to the study, it should be noted that, "there is no single mode of historical research in IR." (Hobson and Lawson, 2008:420). As such, the historical analysis within the thesis adheres to an understanding of the subject matter, while "this approach recognises the role of accident, contingency, agency, contextuality and particularity alongside that played by structure and continuity" (Hobson and Lawson, 2008:429). It should be emphasised that this study draws on a number of influences to illuminate novel areas of influences and patterns regarding the interaction between US energy policy with the US position in the UNFCCC negotiations. This broad overview does not permit the study to analyse the more fine-tuned and nuanced aspects of each administration within this subject area. Such breadth of analysis also requires that concepts be carefully synthesised in order to form a coherent study as there is the risk of meandering between the key points raised. Nevertheless, the broad historical overview and conceptual integration allow the study to identify patterns and factors that may not have been as evident were a different approach utilised. The implications thereof for the theoretical analysis is that the focus is on two levels of analysis and the goals of US energy policy and their interactions with the US position in

[15] Other terms used to refer to a similar concept are disciplined-configurative (Eckstein, 1975); case-explaining (Van Evera, 1997) and interpretive (Lijphart, 1971) case studies (Levy, 2008:4).

the UNFCCC. Neoclassical realism is well-suited for studying the influence between these two arenas, these being international negotiations and a particular policy domain, in this case, energy policy, which should alleviate some of the weaknesses associated with the development of a historical study. Analytical induction, and specifically, in the form of retroduction, will form the qualitative method of analysis by relying on the theoretical assumptions of neoclassical realism (Babbie and Mouton, 2012:270, 643). Retroduction in this instance assists in analysing the emergent patterns in the data in order to understand the above subject matter (Babbie and Mouton, 2012:643).

The use of this case study places emphasis on understanding. Moon (1977:184) highlights that understanding, as an approach in the social sciences, is essentially based on "grasping the *meanings* of human actions in terms of the practices or conventions of the society in which they are performed…". This is in juxtaposition to positivism and its emphasis that explanations in the social sciences can be akin to the natural sciences and thereby human behaviour can be tested and hypothesised as part of general laws (Moon, 1977:184). Thereby, understanding aims to specify what events mean within broader patterns of interactions (Hollis and Smith, 1991:1-2). It should be noted that whenever "interpretation" is mentioned in the analysis, it is not akin to a hermeneutical or postsructuralist approach, but rather, "interpretation" is meant in the sense of theoretical application, where theory was used to "interpret" and understand the data (Mouton, 2012:167-168; Rule and John, 2015:4, Hobson and Lawson, 2008: 416). As such, the use of "interpretation" within the thesis is bound within the case study approach and its emphasis on theoretical application to understand the data (Rule and John, 2015:3; Ridder, 2017:299).

Furthermore, the methodology employed by this study, in combination with neoclassical realism as a theoretical framework, is based on an interdisciplinary and historical approach. The reliance on a historical analysis entails that interdependence of factors in influencing policy-makers is highlighted in contrast to "identifying the 'independent variable' which affects (causes) changes in dependent variables", especially in contrast to the ahistorical positivism that characterises much IR – although history is an integral aspect of much IR analysis (Buckley, 2016:880; Hobson and Lawson, 2008:418). In respect to the importance placed on the abilities of decision-makers to undertake choices when faced with structural- and unit-level constraints in neoclassical realism, a historical analysis likewise highlights the importance of the agency involved in policy-makers' abilities to undertake decisions (Buckley, 2016:881). Narration is an important aspect of this historical approach, and when

placed within a historical analysis, provides an understanding of the context within which decisions took place (Dray, 1971:153; Koliopoulos, 2019; Suganami, 2008: 328 -329). While historical analysis is often associated with the critical-constructivist approach in IR, realist scholars, such as Robert Gilpin, have often made use of historical analysis (Koliopoulos, 2019). Historical analysis is essential to neoclassical realism (Ripsman, Taliaferro and Lobell, 2016). As a historical study, the analysis was careful to develop a narrative that outlined the major turning points in US energy policy history, the history of the US position in the UNFCCC negotiations, and the interaction between these two areas. Given the breadth and complexity of these research areas, a careful assessment had to be undertaken when evaluating the adequacy of different sources to narrate the findings (Buckley, 2016:882). Within historical analysis, source criticism is essential (Buckley, 2016: 882 - 883). Source criticism is based on critically assessing a source based on its internal reliability, and introducing checks through the triangulation of data (Buckley, 2016: 882). Furthermore, the independence of the source, whether it represents a trustworthy representation of the facts, or whether it is geared towards vested interests, should be established (Buckley, 2016: 883).

The interdisciplinary nature of this study entails its analysis of a subject matter that is characterised by its inability to be fully comprehended by a single discipline and thus, "A (mono)disciplinary approach, be it a psychological, economical or technical one, is too limited to capture any one of these challenges." (Tobi and Kampen, 2018:1210). Thereby, the study relied on IR, energy studies, policy studies and historical analysis to enhance the comprehension of the niche subject areas of energy policy and the global climate change negotiations. The research design therefore had to be sensitive to the multifaceted nature of the subject area being analysed over a historical period (Tobi and Kampen, 2018:1210).

To analyse the data that had been collected, both official and non-official sources consisting of newspaper articles, policy documents, academic, governmental and think tank reports, were grouped by era to determine the major turning points in each epoch for the subject matter being analysed. The data was then interpreted through the use of theoretical application. Since this is a historical study, the sources analysed were categorised by era whereby the key policy goals of each era and position towards the UNFCCC by successive administrations was distinguished. The bipartisan Congressional Research Service, which provides legislative assistance to members of Congress (Congressional Research Service, s.a.), was relied on to gain insight into the key milestones in the history of US energy policy and position in the UNFCCC. Triangulation was imperative for the reduction of bias (Heale

and Forbes, 2013:98). To enhance triangulation, the thesis relied on the use of two or more sources to verify the key historical and theoretical claims made therein (Heale and Forbes, 2013:98). These Congressional Research Service reports were further triangulated with newspaper articles, policy documents, academic, governmental and think tank reports. Since energy policy goals were integral to the study, the thesis had to reference government reports and policies; however, these were never used uncritically and always cross-checked with other sources as listed above for areas of agreement and disagreement to develop a rich and unbiased description of the policy areas being analysed.

While neoclassical realism is associated with soft positivism, this research is closely linked with analytic eclecticism, understood as, "Analytic eclecticism does not constitute an alternative model of research. It is an intellectual stance a researcher can adopt when pursuing research that engages, but does not fit neatly within, established research traditions in a given discipline or field." (Sil and Katzenstein, 2012:412).This should not be confused with an "anything goes" approach, but rather a carefully thought out strategy that does not permit itself to be boxed-in by disciplinary and epistemological boundaries.

1.6.1 The Selection of the Case Study

One of the principle challenges for case study research is the selection of an appropriate case for investigation (Bennett, 2006:340). As such, Lijphart (1971:693) stresses that "The different types of cases…should be kept in mind in selecting and analyzing a single case." To mitigate this, the careful theory-guided selection of cases allows the study to achieve the desired level of control (Landman, 2008:28). In this regard, the selection of this case study was considered along a variety of dimensions to draw relevant and meaningful conclusions from the analysis. Since the case study design will be used to understand the interaction between US energy policy and its position in the UNFCCC negotiations, such a selection requires that the case exhibit certain unique traits. The USA, as a global hegemon, occupies a unique position in the international system. Historically, the USA played an important role in the creation of the UNFCCC and other international regimes in the post-Second World War setting. To avoid a random selection of countries, the choice of the USA was selected for additional reasons besides its hegemony (Przeworski and Teune, 1970:32). This case was selected based on the following factors: (i) the USA has been marked by a contradiction in its energy policy (The Economist 2012; 2014; IEA, 2007). (ii) While most new renewable energy capacity had been installed in the developing world (Krey and Clarke, 2011:1153; REN21, 2017: 19) this case study focuses on one of the major investors from the developed

world (UNEP, Bloomberg, 2013). (iii) In 2013, it introduced ambitious targets to reduce GHG emissions and increase its share of renewable energy generation to meet energy demand leading to important policy transformations (IEA, 2013). (iv) It is a party to the UNFCCC and a member of the IEA, although crucially, the United States did not ratify the Kyoto Protocol. Nevertheless, (v) it has considerable clout in the climate change negotiations and is necessary for any effective action to be secured towards a legally-binding agreement.

1.6.2 Limitations

The usefulness of the case study method is that it allows the researcher to conduct more in-depth analysis. This may also open important avenues for further research. An important characteristic of this research methodology is that it also tends to be flexible and is susceptible to modification during the research process (Cresswell, 2009:176). A weakness cited with the application of this research design stems from its limited generalisability to other cases to draw adequate comparisons from (Mouton, 2012, Thies, 2002). Careful triangulation should help to greatly reduce bias (Thies, 2002: 362, 364).

1.6.3 Data Gathering

Although case studies do not require a specific type of data gathering method, because of the inherently complex nature of the international system, much of the data available in IR is problematic (Mearsheimer and Walt, 2013:429). To mitigate this condition, carefully considered research questions should be developed that guide the process of data gathering (Stake, 1995:68). This study generated the necessary data in order to draw its main conclusions by analysing a number of different sources[16] and primarily relies on scholarly synthesis in terms of the data that is to be generated (Bearman and Dawson, 2013:253 and 256; Tong *et al.*, 2012:1). Specifically, data was gathered from the available secondary literature on the sources of US foreign and energy policy and the US position within the UNFCCC from scholarly journal articles as well as books, analysing both domestic and international politics surrounding energy as well as climate change. The research also investigated news articles from such reputable news outlets as *The Guardian*, the *Washington Post*, the *BBC*, the *Economist* and the *New York Times* in order to reconstruct pivotal events

[16] Cresswell further explains that qualitative research methodology also depends on the collection and analyses of several sources of data while patterns and themes emerge from their inductive analyses whereby the information is categorised into increasingly abstract concepts and relationships (2009:175 - 176).

of the eras covered by the research. For the collection of primary data, *the American Presidency Project* has a wide collection of presidential speeches that can substantiate firsthand accounts of the policies of each era. Moreover, the Department of State, the Department of Energy, the White House and Congress release declassified and historical documents from their archives which give a historically detailed account, if not *ad verbatim* narratives, that give an overview of the accounts relevant to a particular historical instance. Reports from departments such as the Department of State, the Environmental Protection Agency (EPA), Department of Energy, and the Council of Economic Advisers on US climate change and energy policies were also collected and analysed to develop a more thorough and contextualised understanding of the documents described above. These primary and secondary accounts are further substantiated by reports and accounts issued by the International Institute for Sustainable Development (IISD), Congressional Research Service (CRS), International Energy Agency (IEA) and Earth Negotiations Bulletin (ENB). Triangulation was an important aspect of data gathering and analysis.

1.7 Conceptual Overview

This conceptual overview provides brief definitions of key terms used within the study. It is organised according to an analysis of the concepts: perception, ideology, cooperation, policy-makers and the various attributes of energy and its correlates. The thesis discusses ***perception*** of policy objectives related to their costs understood as "narrow, rational calculation" (Mastanduno *et al.*, 1989:458 – 459; Brooks and Wohlforth, 2000 - 2001:13; Brooks and Wohlforth, 2002:97). Due to the interdisciplinary nature of this study related to its focus on climate change and energy (Cass, 2017), the definition of perception[17] had to be adapted somewhat for the purposes of the thesis. That is, perception here corresponds to "narrow rational calculation" wherein incentives influence behaviour by changing the relative costs of different kinds of decisions' outcomes (Brooks and Wohlforth, 2002:97). Hence, the thesis uses the term "perception" in a modified manner than what is usually defined as "perception" in neoclassical realism which is understood as policy-makers' *assesssments* of relative power, and indicates decision-makers' assessment of the distribution of power in the international system, and whose focus is on international security (Ripsman, 2017). Since the study focuses on energy policy and the US position in the UNFCCC, the reference to "narrow

[17] It should be noted that perception is not understood in a psychological or subjective sense.

rational calculation" and the costs of different kinds of decisions within perception[18] relates to the calculation by policy-makers of the compatibility between various policy goals, specifically the compatibility between environmental regulation and economic growth, where the cost for US energy is an important consideration especially with regard to its impact on the competitiveness and position of the USA relative to other states within the international distribution of power, and is influenced by the ideology of the administration, that is, Republican and Democrat, and the extent to which policy-makers believe these two goals are compatible. Thus, the responses to the cost of energy are used to gain insight into their influence on the ability of the USA to cooperate, or not, within the UNFCCC. Hence, while policy-makers are rational in the pursuit of their goals, this rationality is limited and influenced by ideology[19] (Oskanian, 2016). The use of perception is restricted to the goals that an administration wished to enact and the compatibility therein between the goals of environmental regulation and economic growth, especially related to the cost of energy.

The perception of policy-makers in the executive branch are influenced by a variety of factors ranging from the media and opinion polls (Mutz and Soss, 1997), the scientific community and scientific discoveries (Pralle, 2009), and vested interests (Ambrosius and Welch 1988). While there is a wide array of influences on policy-makers' perception, this study will only be interested in highlighting the importance of political ideology in influencing the perception of policy-makers within the executive branch. ***Ideology*** is broadly understood as an individual's orientation towards issue areas through a set of political beliefs (Sartori, 1969:400). Within neoclassical realism, ideology has been shown to play an important role in influencing perception (Oskanian, 2016) and while showing *how* ideology influences perception is beyond the scope of the thesis and its broad historical overview, the importance of ideology for policy-makers' perception is that it has important implications for power dynamics in neoclassical realism (Oskanian, 2016), and in the US context specifically and its political polarisation, the ideology of the two dominant parties, Democrats and Republicans,

[18] It should be noted that perception will have a greater analytical role from chapter four onwards.

[19] It is important to note that energy choices in energy policy are multidimensional and it is not possible to reduce energy policy to a single dimension and moreover, the thesis is aware that there are important differences between policy-makers within the above-mentioned political parties towards policy issues (Uslaner, 1989:73 – 74). While ideology describes the characteristics of unit-level dynamics, the thesis does not attempt to explain the origins of ideological differences as this is beyond the scope of the thesis.

has being shown to have immense influences on both climate change politics (McCright and Dunlap, 2011; Gromet *et al*., 2013) and energy policy (Adelman and Spence, 2017; Hess *et al.*, 2016:20).

Within the dynamics of international negotiations, Grieco (1988:600) provides the following definition of ***cooperation*** "International cooperation involves the voluntary adjustment by states of their policies in such a way as to help each other reach a mutually desired goal (Keohane, 1984, p. 51, cited in Grieco 1988:600)". Within the thesis, cooperation is used in an expansive sense wherein the USA cooperates in the climate change regime, in this instance within the dynamics of the UNFCCC, whereby the USA's cooperation is referred to in reference to other states, however as a shorthand thereof in the thesis, reference is also made to the USA's cooperation with the UNFCCC. Within these dynamics, cooperation refers to meeting the UNFCCC's goal of "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." (UNFCCC, 1992).

When discussing ***policy-makers*** and/or ***decision-makers***[20] in the thesis, these terms are used in reference to policy-makers and decision-makers in the executive branch of government. The thesis is aware that there may be divergences between policy-makers within the executive branch towards various policy issues; however, for analytical purposes, such differences will not be alluded to within the analysis as they are beyond the scope of the thesis. Rather, policy-makers within the executive are treated as a coherent entity. Similarly, Congress, in its policy-making capacity, is treated as a coherent entity, even though there may be differences between individual members, while within the thesis, where appropriate, reference may be made to divisive issues within Congress, although this is not the main purpose of the thesis.

Within this study, a complex policy domain related to energy and climate change in the United States is analysed and it is worth briefly providing an overview of the main conceptual aspects of these policy areas that the thesis analyses. The dissertation focuses on the US position in the UNFCCC related to its (in)ability to cooperate – this is often related to its insistence on the use of nationally determined actions instead of quantified, legally-binding emission targets, and that developing nations limit their emissions. Within this context, ***climate policy*** is broadly concerned with the reduction of greenhouse gas emissions

[20] Policy-makers and decision-makers are used interchangeably in the thesis.

and adaptation to climate change (Tol, 2017:432) while ***energy policy*** refers to the regulation of energy markets by governments (Helm, 2002:174). In regards to energy policy, the study is interested in its domestic components related to the perception of the cost of energy and mitigation and the hierarchy and trade-offs between policy goals, while the international component of US energy policy, as a subset of foreign policy, is interested in the US hegemonic role in the global petroleum system between 1945 and 1979. In the US context, the domestic component of climate policy observes the mitigation of GHGs in the US domestic system, while the international component of US climate policy, as a subset of foreign policy and which is one of the main areas of interest for the thesis, refers to the USA's foreign policy towards the UNFCCC (Oberthür and Ott, 1999; Marrow and Light, 2019:13). Although references are made to the environmental dimension of energy policy, domestic climate policy does not feature very prominently in the analysis, however in the context of the Clinton and Obama administrations there is mention of climate policy in so far as it is important for US energy policy. Within this thesis, energy policy is broadly defined, mainly referring to the goals of energy security, low costs of energy and environmental regulation (Yacobbuci, 2016:1). As such, energy policy can have both domestic and international aspects. The design of energy policy in the United States has been a controversial exercise with the difficulties arising from the divergent perceptions surrounding what the hierarchic ordering of these goals should be with Yacobbuci explaining that, "For some, import dependence is the primary concern; for others, particularly those focused on environmental issues, it is a symptom of a general crisis that arises from indiscriminate consumption of fossil fuels. A particularly controversial aspect of the debate is the issue of global climate change, because burning fossil fuels produces large amounts of carbon dioxide, a greenhouse gas. Like the goals of energy policy, the means of achieving them have three dimensions: reducing consumption by increased energy efficiency; increasing domestic production of conventional energy sources, particularly oil and natural gas; and developing new sources of energy, particularly renewable energy and renewable fuels, that can replace oil and other fossil fuels…An issue that cuts across all these factors is the role of government. How much does and should government policy affect energy markets?" Within the US political context, energy policy is translated into numerous pieces of legislation which focus on a vast number of issues (Ratner et al., 2018:1). While a number of agencies influence climate and energy policy in the United States in terms of its design and implementation ranging from the Department of Energy, the EPA, Department of Transportation (DOT), Department of Agriculture, Department of Defense and the Department of the Interior (DOI)

along with states (CAR, 2016), this thesis focuses specifically on the role played by consecutive administrations in shaping US energy policy and its position in the UNFCCC at the federal level.

When discussing ***energy*** the following qualifiers are introduced: primary energy refers to energy as it is found in its unprocessed state in the environment; secondary energy refers to processed energy ready for transmission or transportation; while final energy is used by consumers for consumption (Hulscher, s.a.). Energy commodities can be extracted or captured directly from natural resources (OECD/IEA, 2005:18). *Energy* in this paper is thus shorthand for energy commodities as energy in this form has international implications. The energy system refers to the interconnected network of production, transportation and consumption that changes primary energy sources for social use, at either the individual or communal scale, where the global energy system is the totality of such networks (Podobnik, 2006:3).

In the US context, there is a lot of confusion surrounding the concepts of energy dependence, energy independence and energy interdependence. Although it never materialised, the idea of achieving independence from perceived foreign interference would become a highly emotive rallying call of every presidential run-up (Nivola, 2002:24; Terzic, 2012:2). Even as ***energy independence*** remains a highly ambiguous and problematic statement, the meaning of independence in political rhetoric often refers to either no petroleum consumption or imports (Greene, 2010:1614). While most analysts dismiss energy independence as incoherent, unrealistic and undesirable, energy independence remains a prominent rhetorical device to the trauma induced by the oil crises to the national sense of security and well-being that every presidential administration refers to (Greene, 2010:1614; Sovacool, 2007:5505 – 5506; Terzic, 2012:2; Yergin, 2006:71). Energy independence has the allure of freeing American policy decisions, including its defense, national security as well as foreign policy, from the constraints imposed by petroleum producers (Greene, 2010:1614; Miller, 2010:107). Nonetheless, political debate continues to centre around ways to reduce US dependence on foreign petroleum imports, which is viewed as reducing US vulnerability in its policy domain (Miller, 2010: 107).

There is a great deal of confusion surrounding the concept of ***energy crisis*** which has been used extensively and loosely (Lindberg, 1977:3). It is not clear what the *crisis* actually *is*, and whether there was one crisis or numerous crises, and hence which problems policy was meant to address: did the problem relate to the vulnerability of the supply of energy, or its cost, or

its demand, or of international interdependence (Lindberg, 1977:3). In addition, one of the repercussions of the energy crisis was the broadening of the concept of ***security*** in both academic and policy circles. The new context of the oil crises presented a challenge to traditional notions of security: while conflict has an identifiable threat object, the oil crises introduced issues that were at once abstract but also tangible, such as economic and industrial competitiveness and energy security (Ikenberry, 1986:105). Thus, the conceptualisation of ***energy security*** is differentiated by perspective because as societies came to face new challenges, each historical epoch added a new nuance to the concept (Sovacool and Brown, 2010:80). A qualitative shift occurred in this era in the conceptualisation of energy security as petroleum was no longer merely an element of military strength but had also become a critical component of economic growth (Graf, 2010:334). Instead, economic and social well-being were recognised as critical components for the survival and security of the state (Graf, 2010:334).

1.8 Chapter Outline

Chapter 2 - Neoclassical Realism: Theoretical Origins, History and Evolution

This chapter commences by providing a historical overview and an analytical framework of the main varieties of realism to characterise and justify the use of neoclassical realism. The chapter then describes the development of neoclassical realism as a synthesis of classical and structural realism. An outline is then provided of the main concepts that neoclassical realism will explore to enhance our understanding of the main themes investigated by the thesis.

Chapter 3 - The Emergence and Development of US Energy Policy up to 1989: Petroleum, Hegemonic Ascent and Crises

This chapter traces the historical origins and evolution of the USA's energy policy in the beginning of the twentieth century and the rise of its position in the global petroleum system. It discusses the emergence of two paradigmatic approaches to the energy crisis of the 1970s and the era's environmental constraints. It then discusses the return to traditional energy policy regarding its main assumptions and objectives under the Reagan administration in the 1980s.

Chapter 4 - The George H.W. Bush Administration 1989 – 1993: The End of the Cold War and the Greening of Energy Policy

This chapter discusses the emergence of climate change on the US political agenda in the 1980s. It then analyses the emergence of climate change mitigation as well as the eras' main challenges and its tension in regards to the design of US energy policy and the difficulties the George H.W. Bush administration encountered in establishing a comprehensive energy policy and the constraints it faced at the Rio Earth Conference in designing the UNFCCC.

Chapter 5 - The Clinton Administration 1993 – 2001: The Achilles Hill of the Economy

This chapter discusses the position of the Clinton administration towards energy policy and the UNFCCC. It discusses its attempt to establish a BTU tax on the heat content of the fuel as well as the Climate Change Action Plan (1993) to meet the challenge of economic growth and environmental regulation, while also meeting the goal set by the UNFCCC. The Clinton administration's involvement in the design of the Kyoto Protocol is discussed and the reasons for its inability to ratify this agreement.

Chapter 6 – The George W. Bush Administration (2001 – 2009): Risks to Continuous Supply in the 2000s

This chapter discusses the Bush administration's decision to repudiate the Kyoto Protocol in 2001. It further analyses the Bush administration's Report of the National Energy Policy Development Group (2001) and the Energy Policy Act of 2005 (EPACT2005) in reaction to the era's challenges and the implications thereof for this administration's position towards the Kyoto Protocol.

Chapter 7 - The Obama Administration (2009 - 2015): Energy Policy, Climate Change and the UNFCCC

A discussion of the energy policy developed by the Obama administration during its two presidential terms is analysed. An overview of the differences in the Obama administration's cooperation towards the UNFCCC in Copenhagen (2009) and Paris (2015) and the manner in which the development of its energy policy influenced this is provided.

Chapter 8 – Conclusion

This chapter provides an overview of the study's main conclusions, its weaknesses and general remarks. A recommendation for future research based on the study's findings will be discussed. The historical overview undertaken by the study will illuminate important similarities but also differences between the administrations, and trace the developments of

the synergies and trade-offs between US energy policy and its position at the UNFCCC over the successive decades.

Chapter 2

Neoclassical Realism: Theoretical Origins, History and Evolution

2.1 Introduction

The puzzling interplay between structural- and unit-level variables and resultant policy outcomes has produced a prolific debate amongst IR scholars. The level of analysis problem (Singer, 1961) and the tension between the structure and the agent[21] (Wendt, 1987) hearkens to the very root of theorising in IR about the origins and consequences of state behaviour. Decision-makers need to be able to make sense of a wide range of interactions that occur at the domestic and international levels when formulating a coherent set of policies. Neoclassical realism, which is a synthesis of classical and structural realism, attempts to account for how foreign policy is influenced by the anarchic structure of the international system whose influence is filtered through the unit-level variables found at the domestic setting. Neoclassical realism emphasises the dominant effect of the structure of the international system according to neorealism while maintaining classical realism's emphasis on the intervening role played by domestic-level variables. That is, when foreign policy deviates from optimal, rational formulation, neoclassical realism argues that unit-level variables and ideational structures are responsible for the deviation. To provide an overview of this interaction between unit- and structural-level variables in determining foreign policy outcomes, the subject area to which the theory is applied is energy policy and multilateral environmental negotiations.

The purpose of this chapter is to provide an overview of the basic assumptions of neoclassical realism, how it is differentiated from both classical and structural realism, how it will be applied to the subject matter under consideration and what the possible strengths and weaknesses of this approach are. With this in mind, the chapter begins with a discussion of

[21] Wendt explains this as, "Despite their many differences, however, the "agent-structure," "parts whole," "actor-system," and "micro-macro" problems all reflect the same meta-theoretical imperative-the need to adopt, for the purpose of explaining social behaviour, some conceptualization of the ontological and explanatory relationship between social actors or agents (in this case, states) and societal structures (in this case, the international system)." (Wendt, 1987:338 – 339)

the most important assumptions of the theory as well as to describe additional elements that are important for analysis such as the national interest, political economy, vested interests, and multilateral negotiations. It then presents a brief discussion of neoclassical realism's interaction with energy policy and climate change followed by a discussion of the possible strengths and weaknesses of this theoretical framework.

Neoclassical realism, and its predecessors classical and structural realism, belong to the realist school of thought, which is the oldest and most prominent theoretical framework in International Relations (IR), making these rest on a number of related assumptions which include: the state is the primary actor in the international system; the international system is characterised by anarchy, understood as the absence of a global government or sovereign, which drives international competition and conflict; the struggle for security and material power amongst states remains the essential characteristic of the international system, a system which is inherently *full* of uncertainty and scarce resources leading to interstate competition; states pursue power[22] because they seek survival with power the only guarantee of attaining survival; power, in turn, rests on the material capabilities at a state's disposal; state behaviour will correspond to their relative power distributions; and international change can be explained by change in the distribution of power. Within the subject matter under consideration, the link between the combustion of fossil fuels and the phenomenon of anthropogenic climate change has made imperative multilateral efforts to deal therewith while the consumption of energy resources had been vital for economic growth, therefore attempting to find consensus around the objectives of energy policy has become a controversial policy process. The application of neoclassical realism may shed much light on these complex interactions.

2.2 Realism: History, Evolution and Variations

Neoclassical realism emerged within a particular historical context and in reaction to two of the dominant variants of realism[23], namely classical and structural realism, thus developing into a synthesis of the two frameworks. This section will delve into the historical origins of

[22] For a comprehensive discussion of the concept of power, see Baldwin (1980), *Interdependence and Power: A Conceptual Analysis*.

[23] This thesis uses the term *realism* to broadly refer to a theoretical family that share a set of similar assumptions about state behaviour in the international system. This reference includes the varieties of realism which includes classical, structural, neoclassical, defensive and offensive realism.

realism in order to trace its development and define the nuances of its main assumptions in terms of their application within each strand of the theory. To accomplish this, this will require a description of the main strands of realist thought as these progressed throughout the twentieth century. This accounts for the particular composition of neoclassical realism, and how and why it tried to synthesise, while also compensating for the shortcomings, of both classical and structural realism.

Realism is the dominant theoretical framework in the discipline of International Relations (IR). While there is some variation amongst the different assumptions employed by realists, there likewise exists commonality as to how these are processed together for the purpose of theory construction (Schmidt, 2005:523). To understand the linkages amongst these various phenomena, the chapter turns to a discussion of neoclassical realism and its composition as a means to make sense of these variables.

2.3 Classical Realism: Assumptions and Shortcomings

Realism is the oldest theoretical paradigm in IR whose core assumptions can be traced to Thucydides' *The History of the Peloponnesian War* (431 BC), Niccolò Machiavelli's *The Prince* (1513), Thomas Hobbes' *Leviathan* (1651), Hugo Grotius' *Law of War and Peace* (1625), and Carl von Clausewitz' *On War* (1827) (Lebow, 2006:57 - 62). Throughout its history, these scholars' ideas have demonstrated a certain unity. While a diversity of individuals have contributed to the intellectual discourse on international politics throughout the centuries, as an analytical school of thought, realism, as the overarching theory in IR, emerged in its modern version in the aftermath of the First World War (Burchill and Linklater, 2005:6). In particular, two works stand out as creating realism's theoretical basis in the twentieth century, these being Hans J. Morgenthau's *Politics Among Nations* (1948) and E.H. Carr's *The Twenty Years' Crisis* (1939) (Burchill and Linklater, 2005:1).

Much like its Marxist and liberal counterparts, realism must be viewed in principal as a philosophical tradition rather than a coherent theoretical framework which can be substantiated through verification (Lobell *et al*., 2009:14; Popper, 1962:240). Within this tradition, the core assumptions shared by realists throughout the centuries consist of a pessimistic conception of human nature, an emphasis on the limits to progress and political transformation which is imposed by an egoistic human nature, and the continuity of conflict in history (Lobell *et al*., 2009:14). Interstate competition is a constant element that does not wane. This is perhaps the most important contribution of realism wherein all human

interactions are ultimately characterised by the quest for power (Mearsheimer, 2006:72; Donnelly, 2005:30). This quest for power is also reflected at the interstate level, where interstate competition for power and resources is a continuous portrayal of the international system. This section will briefly introduce two central ideas that are necessary to grapple with for the comprehension of neoclassical realism, these being power and domestic structures.

In contrast to idealism, realists emphasised that historical and contemporary examples indicated no harmony of interests existing among peoples especially in a context characterised by competition over access to resources (Guzzini, 1998:20). These theorists emphasised that events that occur at both the domestic, as well as international level, are ultimately connected and reinforcing and are "understood… as outcomes of similar and reinforcing patterns." (Lebow, 2006:54). Inspired by classical Greek tragedies, classical realism asserts that the pursuit of power is a hallmark of all socio-political spheres (Lebow, 2006:52). Human beings, by their very nature, are driven to pursue power, a pursuit which influences all social relations at all levels, both domestic and international. Classical realists thus stress the cyclical nature of history where periods of order and stability are normally thwarted by actors who seek power and who do not believe themselves to be subject to any form of social restraint (Lebow, 2006:53). While stressing the pursuit of power at the international level, classical realists, are not averse to the influence of ethics on behaviour and motivation (Lebow, 2006: 52). Yet, even ethical and moral pursuits are ultimately trumped by brute power. As a consequence, all politics will ultimately be characterised by the same motivations and dynamics (Lebow, 2006: 54).

While classical realism accepts the anarchic nature of international politics, it still maintains that there is an element of similarity between international and domestic politics (Lebow, 2006:55). That is, classical realists emphasise that all politics, whether domestic or international, is ultimately driven by the same human motivations (Lebow, 2006:55). Morgenthau asserted that domestic and international politics had one commonality: both were a struggle for power (Morgenthau, 1968:36). However, while the struggle for power in domestic politics has been contained by norms, laws, customs and institutions, such containment is less enforceable in international politics (Lebow, 2006:55).

This same variation can also be applied to the domestic sphere (Lebow, 2006:56). Classical realists stressed that domestic politics influenced foreign policy and the behaviour of states. By emphasising social and ideational structures, Morgenthau showed how in strong societies,

such as Britain and the United States, the struggle for power could be channelled through institutions and practices, whereas weak societies, such as Soviet Russia and Nazi Germany, the same brutal struggle for power was evident as in international politics, therefore, "communities and the identities they help to create and sustain are the most critical determinants of order at home and abroad" (Lebow, 2006:56). What this also indicates is that powerful states cannot be restrained by appeals to ethics, multilateral institutions or law but will irrespectively pursue their national interest (Lebow, 2006:53, 58). According to classical realists, the national interest is thus defined in terms of power (Lebow, 2006:58).

What distinguished classical realism in the twentieth century from earlier thinkers had been the concerted effort by Morgenthau and Carr to establish a theory of international politics. From a theoretical perspective, their intent was to infer and understand the general principles and laws which explained outcomes and interactions in international politics amidst what appeared to be unrelated and disparate historical circumstances (i.e. progressing from the particular to the general); the second was to create a set of theoretical concepts that could be used to explain these general patterns, and the third was to qualify the best means to conduct political recourse in a setting where the race for power was all consuming. (Burchill and Linklater, 2005:1) Therefore, the ability of a state to survive will be ensured by its alliances and material capabilities (Lebow, 2006:55 - 56). Primarily classical realists attributed these traits to human nature as opposed to exogenous factors. It is their contention that innate human nature influenced international relations that neorealists would challenge.

2.4 Neorealism

It may be inferred that there are two main divisions in realism, these being between system-centric and state-centric realism (Gilpin, 2001:16). In 1979, Kenneth Waltz[24] published his classic *Theory of International Politics* which was a milestone in realist thought and the discipline of International Relations laying the foundation for system-centric realism. In contrast to classical realism[25], Waltz's theory is defined by two major alterations in realist theory, these being an emphasis on the system, instead of innate human behaviour attributed

[24] While Waltz is widely considered as the most important contributor to neorealism; he is by no means the only one (Bhansali, 1987:631).

[25] It was Richard K. Ashley who first referred to *classical realism* when he differentiated between the theoretical framework that had been developed by Kenneth Waltz in *Theory of International Politics* (1979) and his predecessors (Taliaferro *et al.*, 2009:16).

to individuals or states, in explaining outcomes in international relations, and the second being a scientific approach to theoretical construction influenced by the philosophy of science. In his classic text, Waltz laments that within the discipline of International Relations, the term "theory" is often used far too liberally[26] (1979:1). Instead, any work that provides an account that is more than mere description is ascribed as theory (Waltz, 1979:1). Waltz explains that theories explain laws, laws referring to a relationship between variables (1979:1). Perhaps the best way to understand the difference between neorealism and classical realism, is that the latter accounts for outcomes in world politics by focusing solely on unit-level explanations, that is the internal characteristics of states, while neorealism asserts that in order to explain these outcomes, unit-level variables need to be situated within the effects of the structure of the international system (Waltz, 1988:617). By pointing out the necessity of integrating the international system as a causal explanation, neorealism invalidates the assumption that unit-level variables are sufficient in explaining outcomes (Waltz, 1988:617).

Waltz's contribution to the development of realism had been his ability to draw out clearly what had been the structural effect of the international system on the units thereof, or the behaviour of the state (Baldwin, 1993:3). His work was thus differentiated from earlier texts through his conception of power and his emphasis on states as being the units of the system (Baldwin, 1993:3). That is, the position of states within this system is the explanatory, or independent variable, which explains their behaviour (Gilpin, 2001:16; Waltz, 1993:45). Because of the effect of the system, states try to maintain their position therein (Waltz, 1993:49). By pointing out the necessity of integrating the international system as a causal mechanism, neorealism invalidates the assumption that unit-level variables are sufficient in explaining outcomes (Waltz, 1988:617).

The international system is therefore defined by two main principles, these being anarchy and the distribution of capabilities among states (Waltz, 1990:29). This structure will in turn be transformed by alterations in "the number of great powers"[27] referring to the rise and fall of great powers and the number of power poles (Waltz, 1990:29). The alterations in the number

[26] Waltz explains that in this discipline, a theory is usually applied to a body of knowledge that transcends simply describing the subject matter under its investigation (1979: 2).

[27] *Polarity* refers to the number of great powers which are present in a system (Donnelly, 2005:38). The exact effects of polarity in international relations continues to be a source of debate amongst theorists as to whether a unipolar or multipolar system is inherently more unstable than a bipolar system (Donnelly, 2005:38).

of great powers that a system contains will have consequences for other units' calculations, behaviour and interactions with other states (Waltz, 1990:30). The second major aspect of structure refers to the distribution of power among states (Waltz, 1990:31). While it is correct to assume that other variables such as ideology, or economic strength do play a role in influencing state behaviour, this theoretical framework rests on power[28] as being the *prima facia* variable in determining international outcomes (Waltz, 1990:31; Mearsheimer, 2006:72).

At the core of realist theory are power and interests (Keohane and Waltz, 2000 – 2001:204). In an anarchic international system, where states are legally equal as captured in the political concept of sovereignty, the only difference amongst states is their position of power in the international system as measured by their material capabilities. Power thus becomes both a means to an end, and an end in itself. This helps to explain the continuously competitive nature of international politics since countries with conflicting interests compete to attain these with power being the sole assurance that such interests can be reached in an international system with no overarching authority (Waltz, 1967:3). This of course, is not to ignore the contradictions of power and its role in the international system. Accordingly, Waltz illustrates that, "If power is identical with the ability to control, then those who are free are also strong; and the freedom of the weak would have to be taken as an indication of the weakness of those who have great material strength. But the weak and disorganized are often less amenable to control than those who are wealthy and well disciplined. The powerful, out of their strength, influence and limit each other; the wealthy are hobbled by what they have to lose. The weak, on the other hand, bedevil the strong; the poor can more easily ignore their own interests. Such patterns endure and pervade the relations of men and of groups." (1964:887 – 888).

This system, instead of being hierarchic is anarchic. Being anarchic, there exists no authority higher than the state. What does differentiate states in such a system is their power capabilities, and the distribution of capabilities that units will possess in this system will be

[28] Structural realism is further divided between offensive and defensive realism (Mearsheimer, 2006:72). The main disagreement between the two camps concerns how much power should a state pursue (Mearsheimer, 2006:72). Defensive realists such as Kenneth Waltz would argue that it is not prudent for states to pursue too much power (Mearsheimer, 2006:72). Offensive realists such as John Mearsheimer adopt the contrasting argument that there should be no limit to how much power a state pursues since power is the only guarantee of survival (Mearsheimer, 2006:72).

differentiated across epochs and systems (Keohane, 1986:166). To explain external state behaviour, structural realism formulates that it is necessary to examine the relationship between the behaviour of the state and the distribution of power in the international system (Keohane, 1986:165). Because of this distribution of power in a system, we may expect that smaller countries will act differently to larger, more powerful states, and with alterations in the balance of power, alliances will change because of this shift in power relationships (Keohane, 1986:165). The distribution of power in Waltz's theory is therefore a variable which assumes a central role in this structural theory (Keohane, 1986:166). As a result, the most powerful actors in this system have the most important capabilities in this system (Keohane, 1986:166).

The balance of power occupies a central role in Waltz's work (Keohane, 1986:171). Structural realists argue that it is the anarchic structure of the international system which makes all states race to accumulate power and security (Mearsheimer, 2006:73). Power, in turn, depends on the material capabilities that a state possesses (Mearsheimer, 2006:73). They further emphasise that a corollary of material capabilities[29] is latent power which describes the socio-economic factors that leverage military power (Mearsheimer, 2006:73). States must therefore resort to a self-help system because they cannot rely on any other state when their security is threatened to realise their goals (Waltz, 1979: 118). The state will have to resort to use whatever means is at its disposal to achieve its purposes (Waltz, 1979:118). Under an anarchic system states that do not apply the principle of self-help will be vulnerable relative to other states and be unable to prosper (Waltz, 1979:118). Fearing this vulnerability and the potential negative ramifications, states will therefore revert to the establishment of balances of power (Waltz, 1979:11)

2.4.1 A Critical Appraisal of Structural Realism

While structural realism has widely been accepted as the dominant theoretical framework in IR, it has likewise been open to scathing criticism. The most pertinent of these criticisms is that this theory is unable to account for change in the structure of the international system (Bhansali, 1987:632). Waltz's equation of power with military capabilities has also been lauded as both a one-dimensional conceptualisation of power and a conceptualisation that is a

[29] The material capabilities that a state possesses refers mostly to tangible military assets such as nuclear weapons or armoured divisions, by contrast latent power refers to socio-economic variables such as population size and aggregate wealth (Mearsheimer, 2006:72).

dangerous incentive for state behaviour in the international system as America's traumatic involvement in the Vietnam War would demonstrate (Bhansali, 1987:632). Likewise, power is a difficult term to conceptualise and operationalise and there are serious impediments to its measurement in the international system (Bhansali, 1987:633). Waltz's inspiration from disciplines such as economics, while making neorealism from a purely scientific perspective, more rigorous and parsimonious, has nonetheless undermined the analytical and explanatory richness of realism (Bhansali, 1987: 633). Keohane complains that, "Indeed, his theory is so general that it hardly meets the difficult tests that he himself establishes for theory." (1986: 172). While Waltz's theory may be logically rigorous and parsimonious, his idea that all states behave alike because of the incentives provided by the system was difficult to justify on both empirical and philosophical grounds.

In addition, one of the most glaring criticisms aimed at neorealism is its dismissal of domestic politics in influencing state behaviour. While classical realists emphasised the importance of domestic structures in influencing international outcomes, Waltz argued that the pressure exerted by the structure of the international system made all the units act alike in so far as all these states want power, security and a relative advantage. Realism's assertion that the state is a unitary actor has drawn fierce criticism whereby it is pointed out that it is the interplay of various parts of the state, which leads to outcomes in international relations (James, 1989:218). Thus, neorealism's assumption that the state is a unitary actor, which behaves in a rational[30] manner when interacting with other states, is hard to justify (James, 1989:218). Critics point out that instead of a single actor behaving in a rational unitary manner, the state is in fact a complex structure consisting of conflicting rival groups and organisations with policy altering on the basis of the alterations in the division of power in society (James, 1989:219). Similarly, a significant criticism that has been levelled against structural realism is its assumption that governments are able to navigate their policy response to international issues in isolation from societal pressure and wield effective control over their bureaucracy (Katzenstein, 1976:13).

2.5 The Origins and Main Assumptions of Neoclassical Realism

The seeming inability of neorealism to adequately explain the relationship between the state and domestic society; and how foreign policy was developed within the constraints imposed

[30] According to structural realism, a state is considered to be rational because of its unitariness." (James, 1989:218).

by this relationship in an anarchic international system, created a conundrum (Taliaferro *et. al*, 2009:1). In 1998, Gideon Rose published a paper in which he coined the term neoclassical realism to classify and synthesise the work of a new generation of realist scholars such as William C. Wohlforth, Michael Brown, Sean Lynn-Jones, Jack Snyder, Thomas Christensen, Fareed Zakaria and Randall Schweller who challenged the core assumptions that neorealism rested on and expand its internal logic[31] (Taliaferro *et. al*, 2009:5 – 6; Zakaria, 1992:178). While anarchy and the distribution of power remain central explanatory variables in these scholars' framework, they insisted that unit-level variables are indispensable to the comprehension of state choices and actions (Lindemann, 2014:35). Neoclassical realism therefore attempts to understand the internal process that states undergo to produce a set of policies and actions (Lindemann, 2014:37). Two important considerations arise from this: (i) do states have the *willingness* to "react to systemic constraints and incentives" and, (ii) do states have the *ability* to react to these constraints and opportunities (Lindemann, 2014:37). . Analytically, this overview forms part of Foreign Policy Analysis (FPA) since neoclassical realists stress that foreign policy is grounded in the concrete circumstances that states are embedded in and which needs to be analysed using the abstract assumptions of neorealist theory and the emphasis that is placed on power politics that characterises all forms of social interaction (Wohlforth, 2012:39, 42).

The separation of domestic and international politics in the analysis of interstate interaction has traditionally being a defining characteristic of neorealism (Zakaria, 1992:179). Neorealists suggested that it is the structure of the international system which determines states' foreign policy (Zakaria, 1992:180). Within this framework, the international system remains constant and "imposes the same limitations on states" yet states respond differently to its influence (Katzenstein (a), 1977:597; Zakaria, 1992:180). The question is why? Critics point out that a monocausal reliance on structure as being the sole determinant of international behaviour and interests was inconclusive and negated the effect of alternative domestic explanations (Sterling-Folker, 1997:2). Domestic politics, the internal structure of states, form an important intervening variable that accounts for these differentiated outcomes (Katzenstein 1977(a):588; Zakaria, 1992:198). This may be contrasted with other theories such as Liberalism and Marxism, which argue that the motivation for foreign policy is based

[31] Most of the inter-disciplinary debate over the efficacy of neorealism revolved around the apparent nature of the international system, and the impact that this has on "patterns of international outcomes such as war and peace." (Rose, 1998:144).

on a state's domestic structure, hence in order to change foreign policy, it is necessary to alter the distribution of power amongst domestic actors (Zakaria, 1992:180).

While structural realism treated the state as a "black-box" variable, classical realism indicated that international and domestic variables exert a complex interplay of pressures on the state (Putman, 1988:433). In illustrating the specific case study of the 1973 oil crisis, Katzenstein asks the poignant question as to why when *faced by a common threat* states pursued such different strategies (Katzenstein (b), 1977:880). What are the reasons for this divergence in foreign policies across states (Katzenstein (b), 1977:880)? To answer such criticism, an important contribution to this theoretical framework from classical realism has been its adoption of domestic politics and ideational structures as explanatory variables (Rathbun, 2008:295; Rose, 1998:146). Thus, neoclassical realism evolved in reaction to both structural realism and classical realism: it tried to make up for the shortcomings of both which provides greater theoretical efficacy and more dense analyses. While neoclassical realism agrees with structural realism's assumptions regarding the influence of the anarchic nature of the international system and the limits that this imposes on states' policy choices, it hearkens back and incorporates classical realism's concern with the state and its relationship to domestic society (Taliaferro *et al.*, 2009:19). That is, states will maladapt to systemic constraints when domestic constraints intervene (Lindemann, 2014:37). In order to supplement neorealism's sparse account of the actual behaviour of states and the effectiveness with which rational states will react to the incentives provided by the system, Rose argues that both external and internal variables must be elements of the theory (1998: 145 – 146).

While neoclassical realism remains a structural theory at its core, it has done away with the "billiard ball" conception of the state, whereby any differences amongst states are erased by the structure of the system as Waltz contended. Rathbun argues that the incorporation of ideational and domestic variables are essential factors that help to influence the extent to which a state will be able to use its latent power (Rathbun, 2008:296). At this point, it may be necessary to better account for how these factors are situated in relation to the structure of the system.

While ideas and domestic structures have an important influence on a state's policy choices, it is ultimately the international system which remains the dominant constraint in these interactions as it will bias, or rather mitigate, state behaviour against the influence of

ideational and social structures (Rathbun, 2008:296). Therefore, a state's foreign policy will be an outcome dominated by the state's position in the international system and most importantly by its relative material power capabilities (Rose, 1998:146). But, the impact that power capabilities have on foreign policy will not be linear and uniform, but complex and indirect because the incentives provided by the system have to be interpreted through these intervening variables found at the level of the state (Rose, 1998:146). It is this combination of overarching structural effect and interpretation through intervening variables that categorises this theory as neoclassical realism (Rose, 1998:146). Taliaferro *et. al* (2009:4) indicate that,

> "Specifically, it seeks to explain why, how, and under what conditions the internal characteristics of states – the extractive and mobilization capacity of politico-military institutions, the influence of domestic societal actors and interest groups, the degree of state autonomy from society, and the level of elite or societal cohesion – intervene between the leaders' assessment of international threats and opportunities and the actual diplomatic, military, and foreign economic policies those leaders pursue."

2.5.1 Neoclassical Realism, the State and Domestic Variables

Both classical and neorealism have been criticised for their inadequate conceptualisation of *the state* (Taliaferro *et. al*, 2009:5). *A priori*, it is obvious that there is a relationship between domestic and international levels of analysis in determining policy outcomes and state behaviour. However, while this link *appears* obvious, Putnam reminds us that the real challenge is to discover *when* and *how* this relationship determines policy outcomes (1988:427), and to what *extent*. Putnam's analysis articulates that it is necessary to first assume that the state is concerned with meeting the challenges of both international and domestic pressures (Putnam, 1988:431). Such a perspective illustrates that the structure of the system, as Waltz contends, does not conclusively determine the content of either domestic or foreign policy (Putnam, 1988:432). Far from being a unitary, rational actor that pursues the national interest[32], decision-makers as a shorthand for the "state", often have strong

[32] Most examinations of the sources that influence the behaviour of the state in the international setting cite most prolifically for both theoretical and analytical purposes *the national interest* (Nincic, 1999:29). While there is disagreement over the precise meaning of the term, the pivotal function of the term is teleologically normative (Nincic, 1999:29). Because of this normative function attached to the concept, it has a dual meaning namely a *commendatory* and *descriptive* one (Nincic, 1999:30). The commendatory aspect of the term refers to the ethical

disagreements amongst themselves about what the national interest is and what it is that the international system demands (Putnam, 1988: 432). These decision-makers often have conflicting pressures exerted on them from both domestic and international sources complicating any analysis that posits one analytical level over the other (Putnam, 1988:433).

Reconciling the problematic relationship between the two fields of analysis and the direction of causation concerning these two aspects of the state has been a problematic and inconclusive one (Agnew, 1994:54). Putnam warns that, "…we need to move beyond the mere observation that domestic factors influence international affairs and vice-versa, and beyond the simple catalogues of such instances of such influence, to seek theories that integrate both spheres, accounting for the areas of entanglement between them" (1988:433). Thus, neorealism's contention that all states, regardless of what their domestic political structures are like, will advance the same strategies when confronted by similar incentives produced by the system is a difficult one to maintain in light of empirical and logical observations (Taliaferro *et al.*, 2009:18 – 19). This framework is further weakened through its neglect of such alternative factors such as ease of the mobilisation of resources, agenda setting and the policy environment.

To hearken back to the foundations laid by classical realism, neoclassical realism continues with the realist tradition of identifying the state[33] as the primary actor in the international system (Taliaferro *et al.*, 2009:24). In principal, realism understands the state as a set of institutions enclosed by a geographic locale that has the legitimate monopoly on violence

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standards by which the concept is to be judged while the descriptive component refers to the empirical content that the concept alludes to (Nincic, 1999:30). Related to this aspect, the concept is further designated by two additional qualifiers. The idea that the concept is connected to a description of interest marks it with the allusion to a legitimate claim on behalf of the greater national good that surpasses narrow ideological or factional interest, and the harmonisation of national policies in line with the national interest (Nincic, 1999:30). Within the realist tradition, the conceptualisation of the national interest is derived from its assumptions about the international system and its units (Nincic, 1999:30). Security is the most pressing foreign policy issue for states because of the anarchic nature of the international system which makes states vie for power (Nincic, 1999:32).

[33] The idea of the sovereign state has its origins with the 1648 Peace of Westphalia (Schrijver, 2000:65). Since these origins, the concept of sovereignty has undergone a number of transformations and presently includes a number of important qualifications (Schrijver, 2000:65). Schrijver observes that, "The sovereign State is still widely perceived as both the main instrument for implementing such newly-established rules and the main body to be held internationally accountable for their observance." (2000:65). In spite of arguments laid forth by critics, the state remains an essential actor in international relations.

within its territory against internal and external aggressors[34] (Taliaferro *et al.*, 2009:24). In keeping with the logic of structural realism developed by Waltz, neoclassical realism employs a top-down conception of the state whereby it is the system which determines the external behaviour of the state (Taliaferro *et al*., 2009:25).

While the logic of neorealism presents the guiding assumption with regards to the state's external behaviour, neoclassical realism develops this assumption by extrapolating that differences in regime type, relative material capabilities, geopolitical variety and internal social structures present intervening variables through which the logic of anarchy is interpreted as either constraints or opportunities (Taliaferro *et al*., 2009:26). However, the relationship between the state and society within neoclassical realism is a complex one, whereby an analytical distinction between the state and society, *à la* Max Weber, remains (Taliaferro *et al*., 2009:26). It is necessary to recognise that neoclassical realism does acknowledge that the state, in this instance understood to be the "politico-military institutions and top officials of the polity" as entirely autonomous from society (Taliaferro *et al*., 2009:26).

However, Taliaferro *et al.* (2009:27) go on to explain that there is an encroachment on the autonomy of the executive in various national contexts which limits the executive's ability to accurately evaluate and respond to shifts in the balance of power. Policy responses, therefore, are the culmination of a "state-society" struggle and synchronization (Taliaferro *et al*., 2009:27). Neoclassical realists are also aware that some states do not behave, and develop policies, in a unitary manner where strong divergences exist at the elite level concerning the magnitude and extent of international threats alongside, "persistent internal divisions within the leadership, social cohesion, and the regime's vulnerability to violent overthrow all inhibit the state's ability to respond to systemic pressures." (Taliaferro *et al.*, 2009:27).

Neorealism, reminiscent of the rational actor model, rests on the assumption that the behaviour of states is rational and goal-orientated (Katzenstein, 1976:8). According to this

[34] Agnew (1994:53) explains that there are two conceptualisations of the state in political literature. The first definition refers to a set of central political institutions that have the legitimate use of power. The second conceptualises a territorially bounded entity within which the state has the legitimate use of power. While the first definition has been most prevalently employed in studies analysing domestic political behaviour as well as state-society interactions, the second has been most frequently employed in the discipline of International Relations (IR) where the geographically enclosed sovereign state and the interaction between these states are the prime locus of the discipline (Agnew, 1994:53).

line of thought, decision-makers are insulated and autonomous from society and the bureaucracy (Katzenstein, 1976:8). Structural realism thus defined the state as a unitary, rational actor; however without indicating how the interaction between the state and society determines policy outcomes (Katzenstein, 1976:8). It could be inferred that when it comes to an international crisis like the energy crises, a system-level theory would assume that similarly powerful countries would adopt similar policies to deal therewith (Katzenstein, 1976:19). The historical record reflects that following the energy crisis, advanced industrialised states adopted dissimilar policies to deal with the crisis. By systematically incorporating domestic level variables it becomes evident that states' energy policies will differ as a result of "the structural constraints of domestic policy networks" attributing an explanatory role to domestic and systemic variables (Katzenstein, 1976:19).

By closely examining both state behaviour and policy outcomes, studies began to move beyond the dichotomy of either systemic, understood as the international-level, or domestic explanations for foreign policy outcomes and state behaviour (Fearon, 1998:289). Instead, understanding the interaction between system-level and domestic-level variables in determining policy outcomes became a new academic endeavour. While domestic level variables have been assigned a secondary place in the neorealist explanatory framework, since the 1990s there has been a greater emphasis to integrate them as causal mechanisms within the realist theoretical framework (Sterling-Folker, 1997:1; Zakaria, 1992:179).

Elements of domestic level variables may include legislative and executive branch relations, the media, political parties, political culture, public opinion, interest groups, weak-state strong-state dichotomies, bureaucratic politics, as well as type of government and politics (Sterling-Folker, 1997:2). System-level and domestic-level variables exert a causal influence: it is the system which determines a state's objectives while domestic variables determine the means available to states to pursue these objectives and their interpretation (Sterling-Folker, 1997:4).

Anarchy, within structural realism, makes states concerned with their survival and "rewards and punishes certain behaviours to this end" (Sterling-Folker, 1997:5). While states may have many interests which they attempt to attain, all of these are superfluous if a nation cannot attain the basic element of survival and per consequence, self-help is an imperative characteristic of state behaviour if they are to attain their survival (Sterling-Folker, 1997:5). Katzenstein reminds us that, "The rationale of all strategies is to establish a basic

compatibility between domestic and international policy objectives." (Katzenstein (a), 1977:588).

As discussed, while neoclassical realism rests upon the integration of unit- and structural-level variables, there is the risk that these variables are integrated in a haphazard manner. Since this study is interested in the interaction between US energy policy and its position in the UNFCCC, this interaction has to be carefully evaluated within the integration of unit- and structural-level variables discussed above to understand this complex dynamic. To reduce the risk of haphazard integration, unit-level variables based on the federal level structure and differing perceptions are integrated by tracing the link between a) the goals of energy policy and b) the US position within the UNFCCC, along with the impact of the distribution of power at the system-level on the goals of US energy policy and its position in the UNFCCC. By identifying the interaction between these factors and the distribution of power in the international system it becomes evident how a monocausal explanation is unable to adequately account for policy makers' support for a particular set of policy goals. Understood within the context of neoclassical realism, this permits the theoretical contours of this framework to gain better insight into the contradictory pressures exerted on policy-makers at both the unit- and structural-levels. This would permit the study to achieve better insight into the interaction between US energy policy and its negotiating position within the UNFCCC process by investigating the influence of both structural, but also unit-level variables, thereby gaining a more comprehensive overview of this interaction.

2.5.2 Neoclassical Realism, Power and the Global Political Economy

The end of the Cold War drew many analysts to the premature conclusion that realism would no longer be effective as a theoretical framework in a new era where global markets and the promotion of human rights would influence international behaviour; and a cascade of actors beside the state would pursue power and influence internationally[35]. Perhaps one of the most glaring criticisms directed at realism is its supposed disregard for economic issues. However, this is more an oversight on the part of its critics about the history and logic of realism, rather than concrete fact. While it is correct that classical realists such as Morgenthau and Kissinger subsumed the importance of economic issues when national security was threatened by the Soviet Union and Mutually Assured Destruction (MAD) during the specific context of the

[35] See Keohane and Nye's *Power and Interdependence* (2001).

Cold War, realists have always pressed the importance of economic power because wealth and power are inseparable (Gilpin, 1984:293).

Structural realism's analysis of the global political economy may be defined as the influence of anarchy, the defining characteristic of the international system, "on the exchange of goods and services among states" (Gowa, 1994:31). Realists became increasingly concerned about the relationship between power and economic issues as the Cold War became tepid during the 1970s which had allowed new economic issues to gain prominence such as the effects of foreign direct investment (FDI), trade as well as money on domestic, and at times, security policy (Gilpin, 1984:293). In an anarchic international system, governments will often intervene in trade relations because of national security considerations (Gowa, 1994:38). These assertions are consistent with Gowa's study which found that free trade was more likely between states that have political-military alliances and an international system characterised by a bipolar rather than a multipolar order (Gowa, 1994:31). This was not a new addition to the realist paradigm as a historical examination of the realist tradition will in fact reveal that realism has always been interested in "the economic dimensions of statecraft" which can be traced as far back as Thucydides' *History of the Peloponnesian War* (Gilpin, 1984:293). This includes such long-standing themes as the political manipulation of economic influence, the independence of national economies as well as conflict concerning energy resources (Gilpin, 1984:293). In *The Twenty Years Crisis*, E.H. Carr alluded to the centrality of information and economics as "weapons of power in international relations" (Bhansali, 1987:633). Realists have long recognised that there is a vital connection between global politics and global economics (Gilpin, 1984:293).

Gilpin in fact asserts that a liberal international economy has three important attributes which together compose the political framework for the global economic system (1984:296). The most prominent of these is a hegemonic power, or at least a group of liberal powers, that have the capacity to impose the rules of a liberal economic structure (Gilpin, 1984:296; Krasner, 1994:18). The second dimension is their commitment to common security, economic, as well as political interests which forges a mutual alliance amongst these states (Gilpin, 1984:296). And lastly is a common ideology committed to liberal economic values (Gilpin, 1984:296). The most revelatory historical example showcasing this political framework can be traced to the end of the Second World War where the establishment of American hegemony, an ideological stance qualified by the economic principles attributed to Keynesian welfare economics and an anti-Soviet alliance were for this historical epoch its defining features

(Gilpin, 1984:296). Other important historical examples that hearken to the close connection between power and wealth was especially evident in the 17th and 18th centuries when the national interest was regarded as a balance-of-payment surplus and advantageous trade (Gilpin, 1984:294).

From a political economy perspective, realism[36] characterises world politics by the fragility of the balance of power and the inherent conflict of interests that exists among nations (Krasner, 1994:14). It attempts to substantiate how a state's power or interest helps to determine the outcome of distributional conflicts, or zero-sum games (Krasner, 1994:14). This school of thought has underscored how rules which regulate capital flows, foreign aid, communications and trade are not neutral and distribute inequitable costs and benefits to different nations (Krasner, 1994:17). Therefore, issues which relate to distributional effects in the international system will provoke the most conflict internationally (Krasner, 1994:17 - 18). Because the international system is anarchical, the effects of this distributional inequality will be influenced by a state's power capabilities (Krasner, 1994:18).

There is also an implicit acceptance that technological innovation[37] is an important contribution to economic growth and in turn will amplify the power of the state (Drezner, 2001:3). Reaching new technological frontiers that provide comparative advantage in turn helps the state attain greater power, or even, hegemonic status (Drezner, 2001:3). Long-cycle theorists have indicated that hegemonic powers arise because they had been the first to innovate new technologies in strategic sectors (Drezner, 2001:4). The propensity though is that innovation rests on a number of preconditions namely size of the market, factor endowments, industrial organisation, and an entrepreneurial culture as well as a decentralised state structure (Drezner, 2001:6). States have historically been centrally preoccupied with fostering innovation because of the link between innovation and economic growth in industrial states (Drezner, 2001:6). Specifically, a long-cycle historical analysis indicates that it is breakthroughs in innovation which occur in leading sectors that have the greatest impact on economic growth and by extension state power (Drezner, 2001:6). The historical

[36] Liberalism, in contrast to realism, would emphasize the mutual benefits that arise from interstate cooperation and the harmony of interests that exists among states (Krasner, 1994: 14).

[37] The concept of technological innovation can refer to activities which entail the creation of a novel product; a production process whose efficiency has been enhanced and/or the establishment of a new organisation process for production and distribution (Drezner, 2001:6).

experience further indicates that a state becomes hegemonic when it occupies a near-monopoly in the process of innovation in its leading sectors (Drezner, 2001:6).

2.5.3 Ideas and Perception

Although ideas[38] feature prominently in neoclassical realism, they remain somewhat undefined in most scholarly analyses and moreover key terms such as ideas, beliefs, and ideology are often used interchangeably (Rose, 1998; Rathbun, 2008; Kitchen, 2010:119). Moreover, ideas are used in neoclassical realism in a limited manner, with their influence being important in regards to a state's ability to use its latent material power (Rathbun, 2008:296). While structural realism with its emphasis on materialism stresses objectivity and places emphasis that decision-makers have an accurate understanding of the distribution of power which is directly transmitted into foreign policy outcomes, neoclassical realism indicates the complex nature of the relationship between the structure of the international system and decision-makers' ideas and perception[39] thereof (Rathbun, 2008:296, 299).

Ideas, as independent variables, are traditionally understood to be the theoretical jurisdiction of the liberal and constructivist theoretical frameworks in IR (Gilpin, 1996:3). How can a realist theoretical framework then, with its emphasis on material explanations and interest, be accommodated to a framework that emphasises ideas and ideology as influencing policy-makers? Ideas can serve the interest of power. Per consequence, policy-makers need to make choices as to how to accommodate conflicting interests and how to secure and increase their state's relative power. In this view, policy-makers face a wide continuum of policy choices often involving a trade-off between economic capability and military security infusing the process with a certain amount of ambiguity (Brooks, 1997:471).

Realism emphasises that an alteration in state behaviour is accompanied by "adaptation to external constraints" which is informed by alterations in relative power (Wohlforth, 1994/95:96). Within this configuration, it is policy-makers' *assessment* of power that will determine both their interpretation of international events and alterations as well as the accompanying course of action that they will embark on (Wohlforth, 1994/95:97). Crucially,

[38] While ideas form part of an extensive and in-depth discussion in IR this is beyond the scope of the thesis.

[39] While perception may be understood as an intersubjective belief, this is not the definition of perception used by the thesis (Eun, 2013:373).

realists do not discount the role of ideas, rather, ideas are integrated into the logic of realism to account for a particular set of outcomes.

Within this analytical framework, the imperative is to understand "the mechanism through which capabilities are translated into actions" and there are numerous factors that will influence these assessments of capabilities (Wohlforth, 1994/95:97). Therefore, the manner in which decision-makers perceive events will influence their response (Wohlforth, 1994/95:98). The international system therefore exerts an indirect effect on outcomes, unit-level variables will determine the precise form these will take on. Waltz points out that while the international system may be relied on to explain the emergence of a general pattern of behaviour such as the outbreak of war, in order to explain the particular occurrence of a phenomenon and its substance, it is necessary to rely on first and second images as immediate causes rather than permissive causes (2001:232 – 233).

Neoclassical realism appropriates ideas and perception to fit the logic of realism wherein neoclassical realism uses ideas and perception to define power and whereby ideas are also central for the utilisation of self-help in an anarchic international system (Rathbun, 2008:300, 301). Ideas must therefore be understood within the constraints of relative power (Rose, 1998:157). Ideology and perception, as part of ideational constructs, are thus used in a limited sense for the purpose of self-help and are influenced by the structure of the international system (Rathbun, 2008:303). Systemic pressures are processed through the perception of decision-makers (Rose, 2008:158). Within neoclassical realism, perception is often defined as decision-makers' *assessment* of relative power, and provides an explanation of how policy-makers respond through this assessment to objective reality and therefore the focus within these analyses is "how perceptions of the balance of power affect state behaviour" which highlights why it is often difficult for decision-makers to adequately respond to the objective reality related to the distribution of power in the international system since decision-makers' perception influences their "calculations of cost and risk" and which may result in either "underbalancing or the adoption of other nonbalancing strategies" (Glenn, 2009:525; Schweller 2004:165, 169; see Rose, 1998:147).

Within IR, one of the most well-known neoclassical realist scholars working on the intersection between ideas, perception, the structure of the international system, and policy outcomes is William C. Wohlforth (1994/95; 2000 - 2001[40]). The structural realism that had

[40] Co-authored with Stephen G. Brooks

been developed by Kenneth Waltz (1979) expounds that unitary states react to the material incentives provided by the international system and rationally adopt policies in light of the incentives provided by the system. Although it allows for a parsimonious analysis, this nonetheless is a very narrow definition to fully explicate the role of ideas in influencing outcomes (Brooks and Wohlforth, 2000 - 2001:12). Thereby Brooks and Wohlforth (2000 - 2001:13) argue that, "We restrict our analysis in two critical ways. First, we define material incentives solely in terms of the costs of maintaining the status quo. Second, we define material costs exclusively as economic costs… We limit the analysis to economic costs partly for reasons of parsimony, partly so that our analysis is falsifiable, and partly to ensure that our examination stands clearly in contrast to the ideational explanations outlined above." Using deductive reasoning, it is therefore possible to analyse policy-makers' reaction to structural change based on their position in the international system (Brooks and Wohlforth, 2000 - 2001:13). Brooks and Wohlforth thereby indicate that there is a connection between ideas and the international context (2000 - 2001:13). That is, "The starting point of most models of ideas and foreign policy is the existence of a causal gap between material incentives and the behavioural response – a gap that only ideas can fill… Consider first the relationship between decline and elite perceptions of decline. For material change to affect policy, it must be perceived. The connection between material change and perceptions of that change cannot be instantaneous, however: Observers can only know that they are living through a "trend" if the phenomenon has been under way for several years… The above evidence indicates that decline, perceptions of decline, new ideas, and new policies were closely related." (Brooks and Wohlforth, 2000 - 2001:27, 33).

Therefore, the importance of perception is that it helps policy-makers to filter a vast amount of complex information (Eun, 2013:373), especially within the research area of the thesis regarding information related to complex energy and climate change issues. Within this analysis, perception is influenced by ideology, referring to an individual's orientation towards issue areas through a set of political beliefs (Sartori, 1969:400), and moreover; the compatibility between various policy goals, specifically the compatibility between environmental regulation and economic growth, where the cost for US energy is an important consideration. While the classic definition of perception in neoclassical realism refers to decision-makers' assessment of the distribution of power in the international system (Ripsman, 2011), the thesis has adapted the use of "perception" to the one traditionally relied

on in neoclassical realism. Since the study focuses on energy policy[41] and the US position in the UNFCCC, the reference to "narrow rational calculation" and the costs of different kinds of decisions within perception relates to the calculation by policy-makers of the compatibility between various policy goals, specifically the compatibility between environmental regulation and economic growth, where the cost for US energy is an important consideration and how it will influence the competitiveness and position of the USA relative to other states in the international distribution of power, with the importance of the ideology of the administration therein highlighting their approach to the compatibility between the goals of environmental regulation and economic growth (Oskanian, 2016). The definition of perception as "narrow rational calculation" (Brooks and Wohlforth, 2002:97) relates to the costs of energy and implies that policy-makers approach policy problems as rational actors that have a set of goals that they wish to attain albeit with limited information. Moreover, rationality implies that, policy-makers "possess 'consistent, ordered preferences, and . . . calculate costs and benefits of alternative courses of action in order to maximize their utility in view of these preferences.'" (Grieco, 1988:496)." In this context, ideology is important since it influences how policy-makers calculate the cost of energy and whether environmental regulation is compatible with economic growth. Within the US context, the main ideological divergences between the Republican and Democratic parties towards energy policy are differentiated between the emphasis on limited government regulation of the economy and a reliance on market instruments supported by the Republican party as opposed to a greater regulatory role for government in the economy which is favoured by the Democratic party, although it is important to emphasise that there are differences within these parties towards these issues (Hess *et al.*, 2016:20; Uslaner, 1989). Other important differences between the two parties relate to the scientific consensus surrounding anthropogenic climate change and the means to deal therewith (Funk and Kennedy, 2016:1).

2.5.3.1 Ideas and the National Interest

The concept of the national interest, the *raison d'état,* forms an important element of realism and has been used within the theory as an explanatory variable (Burchill, 2005:4, 32; Kratochwill, 1982:10). Classical realists such as Hans Morgenthau defined the national interest in terms of power which acts as a continuous guide to policy-makers and usually

[41] It should be noted that energy policy choices are multi-dimensional and it is not claimed that perception influences all policy goals (Uslaner, 1989:73).

alludes to the "protection and security of the physical, political and cultural entity called the nation" against other states (Burchill, 2005:35 - 37). The idea that certain actions were constrained by the international system was embedded in the national interest according to this mode of thought (Kratochwill, 1982:4). Kratochwill underscores that, "Implicit in this notion was the recognition not only that political action was constrained by an international system but that the failure or success of a policy could crucially depend on its compatibility with certain 'rules of the game,' which served as a common framework for all sovereigns and allowed decision makers to pursue conflicting goals without falling into a totally unregulated struggle."(1982:4). Because of the anarchic nature of the international system, the most important national interest according to realists is that of the attainment of security understood as territorial integrity, strategic power and physical survival (Burchill, 2005:47).

Therefore, according to the logic employed by realism, the national interest is synonymous with the attainment of security and power (Burchill, 2005:8). Its connotation with national security and aggregate power has meant that the national interest has traditionally being used as a justification for certain policies and as a result influences what policies states are likely to adopt (Burchill, 2005:9; Kratochwill, 1982:2 – 4, 9 - 10, 24). However, the reality is more complex. While classical and neo-realists emphasise either domestic or structural factors respectively as influencing the composition of the national interest and what it will be used to justify, neoclassical realists, in contrast, emphasise that it is a combination of domestic and structural elements which influence the national interest (Dueck, 2009:139 – 140). That is, while the international system may exert pressures on all states, unit-level variables will influence how decision-makers will react to these constraints which often results in negative outcomes in a state's pursuit of its foreign policy objectives (Dueck, 2009:139 – 140).

With regard to the national interest, Putman points out that decision-makers have disagreements about the meaning of the national interest and associated response to the pressures exerted by the international system making it difficult to design and justify policies (1988:432). Far from being a clear guide to policy or representing the national good, the national interest is an ambiguous, normative concept. While the idea of the national interest may allude to the notion of decision-makers acting in the name of the public good whereby the interests of all members of the state are met, in reality, this is much more complex then such a narrow definition would allow (Burchill, 2005:47). Problematically, the national interest can be linked to ideological manipulation and national culture making it difficult to separate legitimate policy objectives from those supported for the sake of vested interests

(Kratochwill, 1982:9; Brands, 1999:241). Although security and power remain the pinnacle aims of the national interest, within a particular context the national interest is not synonymous with a single value but rather is a composition of a hierarchy of interests of which security is the most important (Kratochwill, 1982:6; Brands, 1999:239 - 240). There is therefore no clear idea of the national interest or how to attain it.

Because of this interaction, the state becomes a conduit for the pursuit of control and power by various groups (Katzenstein (a), 1977:601). Vested interests manipulate state structures for their benefit while rival social groups who lack the organisational structure to access and transform policies have to endure any repercussions (Zakaria, 1992:182). Because of the presence of vested interests in the polity, state actions are often geared towards meeting the needs of these groups which accumulates great benefits to this particular group while generating costs that are distributed unto the rest of society (Zakaria, 1992:182). Vested interest groups such as big business and the military "hijack the organs of government for their selfish goals. The taxpayers who foot the bill lack the organization and access to the state apparatus that would allow them to lobby successfully for their interests" (Zakaria, 1992:182). Because of the dominance of and exclusion of various social groups there is much indication that the national good and the public interest are problematically addressed by foreign policy (Katzenstein (a), 1977:601).

This illustrates that decision-makers do not have an objective set of criteria for evaluating the national interest but that instead, they are influenced by ideational and ideological rationale as well as the incursion of vested interests (Burchill, 2005:10). The national interest is thus politically contested and has different consequences and motivations which are challenged by different sectors of society (Brands, 1999:246). Furthermore, the national interest has implications for the structure of the global economy which has developed because of the combined impact of the national interest and interstate interactions (Gilpin, 1975:37). From the perspective of the national interest, political and economic interests are intertwined and have a reciprocal relationship (Bergsten *et al*., 1975:4; Bulmer, 1994:69).

2.5.4 The Neoclassical Realist Approach to Power and Security

Power remains a defining characteristic of the neoclassical realist framework since the struggle for security and power amongst states is a defining characteristic of the international system, a system which is inherently *full* of uncertainty and scarce resources (Lindemann, 2014:33; Scmidt, 2005:523; Taliaferro *et. al*, 2009:4). However, the actions that states will

pursue will correspond to their relative power distributions (Taliaferro *et al.*, 2009:4). Neoclassical realists continue to emphasise that ultimately international relations is marked as a continuous struggle for power amongst nations (Lindemann, 2014:33; Schmidt, 2005:528). As such, states respond to and are influenced by the distribution of power in the international system.

Such an assertion is based on the assumption that power[42] is ultimately the currency that enables states to attain their interests in the international context (Lindemann, 2014:33). Because the international system is anarchic, states must resort to self-help in order to ensure their survival, the acquisition of power being the most important element guaranteeing this survival and ensuring self-help (Lindemann, 2014:33). While the struggle for power defines the various strands of realism, there is some ambiguity as to what power is and how it should be defined, operationalised and measured (Scmidt, 2005:523, 526). While neoclassical realists accept structural realists' assumption that the structure of the system compels states to pursue power they insist that unit-level variables will have an influence over how states will interpret and pursue this and how such incentives will be filtered through the domestic political system to produce the final outcome and policy (Schmidt, 2005:528).

It is by studying the interaction between power and policy that neoclassical realists emphasise the necessity of analysing the context within which foreign policy is developed to understand the complex relationship between both variables (Rose, 1998:147). Neoclassical realists indicate that a number of intervening variables influence the state and international outcomes which allows them to give a different explanation for the role of power in international relations (Schmidt, 2005:528). Within this framework, unit-level variables form intervening variables through which the incentives provided by the system are interpreted, thereby producing subsequent policy outcomes and state behaviour, in spite of apparent relative power distributions (Wohlforth, 1994/95:95). This assertion is based on an observation that while a state's foreign policy may be circumscribed by its relative material power capabilities this is an imperfect relationship (Rose, 1998:147). That is, there is no perfect correlation between the state's material capabilities and foreign policy outcomes (Rose, 1998:147). Put otherwise, among numerous policy choices, why does a state make choice A as opposed to choice B? As a result, it is necessary to evaluate the structure of the state relative to its

[42] While there is some disagreement over whether power should be understood as relational or the control of certain resources (Scmidt, 2005:529), it is not the purpose of this thesis to comment on this debate.

society as this will help to determine the national resources that can be galvanised towards foreign policy objectives (Rose, 1998:147). Because of the involvement of domestic groups, decision-makers' ability to "extract national power", or follow through on their preferred decisions, will ultimately be circumscribed (Lindemann, 2014: 37 – 38). This will help to account for why states that have similar capabilities, but different state-society relationships will act differently when confronted by similar incentives and constraints (Rose, 1998:147).

In commonality with other varieties of realism, neoclassical realism begins its analysis by emphasising the importance of the distribution of power in the international system (Lindemann, 2014:38). The conceptualisation of power endorsed by neoclassical realism is the "material conception of power"[43] (Schmidt, 2005:543). Neoclassical realism makes a distinction though in its estimation of foreign policy outcomes by emphasising that material capabilities alone cannot account for policy outcomes (Schmidt, 2005:543).

Ultimately, it is the combination of domestic variables alongside material capabilities which determine the aggregate power that a state will be able to utilise (Schmidt, 2005:543; Lindemann, 2014:37). Policy-makers' subjective understanding of their states' power is the most important element for their manoeuvring on the international stage (Schmidt, 2005:544; Wohlforth, 1994/95). This is in contrast to structural realism which emphasises an *objective* relative distribution of power in the international system (Schmidt, 2005:544).

To tie all these loose ends together, realists argue that a state's goals are determined by its capabilities; its interests ultimately reflect its power which conceptually operates on two levels, firstly, state interests reflect the distribution of power domestically and internationally, and secondly power determines what a state is practically capable of achieving (Zakaria, 1992:188; Wohlforth, 2012:37; Hill, 2003:2). States will use their power to pursue their national interest with disregard for moral imperatives and at times international security. While this may describe an important facet of international interactions, this still says very little about what power in international relations actually is, or how domestic politics

[43] National power in realist thought has been understood as the acquisition of specific resources (Schmidt, 2005:529). Indicators of national power usually include gross national product (GDP), size of population, territory, and armed forces as well as military expenditure (Schmidt, 2005:529). However, Schmidt points out that, "…it is not the mere possession of power resources that matters, but the ability to convert them into actual influence." (2005:523). Energy, as has been explained, is an important input of all these functions and modern processes.

influences it. There still remain unanswered questions regarding what makes one nation powerful relative to another (Morgenthau, 1968:107)? Nonetheless, power can only be measured in relative and not absolute terms because it will determine what a nation may achieve relative to other nations in the international system.

Realism continues to be overly concerned with the security of the state and its foreign policy (Legro and Moravcsik, 1999:5; Katzenstein, 1976:4). Since the international system is characterised by anarchy whereby there is no central, hierarchically-organised authority, security is the primary goal of all states. However, to avoid reductionism, it is important to understand that the anarchic nature of the international system does not determine how states will respond to threats. To understand the role of Waltz's structural level within neoclassical realism, at most, the international system acts as a permissive rather than a necessary cause (see Waltz, 2001). Thereby, the structure of the system provides incentives to policy-makers and presents a combination of constraints and opportunities which policy-makers must interpret and adjust to, as such, "The environment gives no guidance regarding how best to obtain security, nor does it demand that only particular processes may exist." (Waltz, 1979:92 in Sterling -Folker, 1997: 19). Realism does make the distinction that any change to a state's security should be understood in relative and not absolute terms (Katzenstein, 1976:9). Some realists argue that in a hierarchy of national interests, security and survival take precedence over all others. Neoclassical realism stresses that policy-makers' decisions concerning national security will not merely be determined by systemic elements but will be influenced by "the domestic political process" since decision-makers are constrained in their ability to determine security policies but must consider the domestic constraints thereon (Schweller, 2004:167, 174). Often, decision-makers and domestic groups diverge about the means to respond to a threat, thus leaders have to consider both domestic support and the type of threat when considering policy options (Schweller, 2004:174).

2.5.5 Multilateral Cooperation

Structural realists argue that international institutions reflect the distribution of power amongst states (Mearsheimer, 1994 – 1995:7; Martin, 1992:783 - 784). Because of the influence of powerful states, international institutions exert minimal impact on states' behaviour; rather what international institutions can achieve is determined by states' self-interested calculations (Mearsheimer, 1994 – 1995:7). The anarchic nature of the international system makes it difficult to cooperate and come to an agreement that is in line

with the common interests of all states involved (Jervis, 1978:167). Rather, powerful states will pursue their own interests and will design international institutions to maximise these. Ultimately, states will attempt to maximise their "relative power positions over other states" because this increases the state's security in relation to other states (Mearsheimer, 1994 – 1995:11 - 12; Mearsheimer, 1995:82).

While cooperation amongst states is possible in an anarchic international system, this is a challenging prospect to attain because of two reasons, the propensity to cheat and relative-gains considerations (Mearsheimer, 1994 – 1995:12; Powell, 1991:1303; Grieco *et al.*, 1993:729). States will therefore focus more on their relative gains which increases the degree of conflict, rather than their absolute gains, a position associated with neoliberal institutionalism (Powell, 1991:1303). Since states are concerned more with their relative gains, gains and losses tend to be seen in zero-sum terms (Powell, 1991:1303). Relative-gain concerns will determine to what degree and with whom states will be willing to cooperate while the fear that other states will cheat will inhibit cooperation for fear that other states will gain a relative advantage (Mearsheimer, 1994 – 1995:12 - 16). Anarchy will also propel states to compete amongst one another (Grieco, 1988:485). Under such circumstances, cooperation is difficult to achieve since each state is concerned about being exploited by another state (Jervis, 1988:318). Although states may want to cooperate, since each fears being exploited by another state should it do so, there is an incentive for all states involved to not cooperate (Jervis, 1988:318). States' self-interested calculations will therefore be influenced by their domestic structures and perception of their position relative to that of other states in the system.

In multilateral environmental negotiations, the distribution of costs to actors and different conflict groups entail ramifications that more often than not negate their perceived benefits (Gilpin, 1996:10). Since these negotiations will have cost implications for various social groups, states have an incentive to resist these costs and free-ride while transferring these to other states (Gilpin, 1996:10). Although all states may gain absolute gains, states will be more concerned with gaining relative gains and the distribution of production and labour capabilities in the interstate system (Gilpin, 1996:10). As a result of these intertwined factors, states disagree over the rules and nature of international regimes that distribute a set of costs and benefits in the international system (Gilpin, 1996:10). This begs the question, to what extent would states sacrifice global benefits to maintain a relative advantage?

Problematically, Jervis (1988:325) illustrates that, “Sometimes we can deduce preferences from the structure of the system, as Realism suggests. But even a structural theory of international politics as powerful as Waltz's has trouble producing many precise deductions. As the endless arguments about the national interest remind us, only rarely can descriptions and prescriptions of what the state will or should prefer be drawn from its objective situation… More broadly, one does not have to be a Wilsonian or a Marxist to argue that the goals states seek, the costs they are willing to pay, and the instruments that are believed appropriate can be deeply affected by the nature of the state.” It is often easier to treat the state as a rational, unitary actor when security issues are at stake; however when conflicts arise over non-security issues such as trade, the state can be guided by other actors such as classes, groups and sectors (Jervis, 1988:325). Apart from the intrusion of special interest groups, the beliefs and ideologies of decision-makers can also assist them in determining their interests, thereby “The effect is that under circumstances in which some statesmen will believe that mutual cooperation is beneficial, others will see it as a trap.” (Jervis, 1988:326).

Structural realism has for the most part ignored the decision-making level of analysis, hence it is important to differentiate the circumstances under which beliefs can influence decision-makers’ perception of outcomes (Jervis, 1988:336). In spite of structural realism’s assumptions, there are many factors beside objective evaluations that determine cooperation (Jervis, 1988:340). Often, it is decision-makers beliefs about the efficacy of alternative policies that influence the decision to cooperate or not (Jervis, 1988:340). The great puzzle that is presented to the theorist is to evaluate when hurdles to cooperation are due to the system or beliefs (Jervis, 1988:340).

2.5.6 Neoclassical Realism and Energy: A General Overview

While a general account has been provided of the history and evolution of realism; at this point, it is useful to attempt an initial account of neoclassical realism’s theoretical stance on energy policy. One of the initial challenges that the study experienced in this application is realism’s stance on and explanation of non-military threats in the international setting. While there have been numerous examples of state’s engaging in conflict over access to energy sources, this is a peripheral element of the study’s investigation. However, the law of thermodynamics, combined with the geographic concentration of particular energy resources such as petroleum and their negative environmental externalities posits energy in a unique position in the political-economy framework. Ultimately, industrialised societies are energy

dependent. And it is this creation of an industrialised civilisation so utterly dependent on energy through the combustion of fossil fuels that has been a source of economic growth but also threatens the delicate balance between man and nature that this civilisation centres on. The last energy transition introduced by the technological innovation of the Industrial Revolution gave the impetus for increased economic output, colonialism and under certain conditions hegemony (Podobnik, 2006; Debeir *et al.*, 1991). For social, military and economic reasons, the state has been the essential actor in this configuration (see Macdonald, 2012).

For realism, energy can be understood to be a source of power and material capability, and survival. Likewise, energy is a tool in the self-help method that states have to rely on in a system characterised by anarchy and hostility (Kropatcheva, 2014:2). States will be fundamentally concerned with enhancing their energy security and their energy capabilities (Kropatcheva, 2014:2). As a result there has historically been a close association between the state and energy industries (Kropatcheva, 2014:2; Macdonald, 2012). Gaining access to and developing end-use technology is likewise a crucial aspect of these latter dimensions. The result of our dependence on fossil fuel technology and energy has resulted in the phenomenon of global climate change. The state's ability to meet the interrelated challenges of economic growth, energy security, energy poverty, development and climate change mitigation places it in a somewhat contradictory position. The state will be forced to contend with domestic and international pressure in its attempt to find solutions to these problems.

Modern energy derived from fossil-fuel based production and consumption as well as anthropogenic climate change are linked. The combustion of fossil fuels produces greenhouse gases[44] (GHGs) which are responsible for anthropogenic climate change. This will be differentiated across cases since "Country studies emphasise large national differences in underlying attitudes towards energy and the greenhouse effect." (Grubb *et al.*, 1991:911). Although the objective may be clear, the ability to limit GHG emissions is dependent on factors such as the nature of a country's political culture, its economic system and philosophy, the stage of its development, its energy infrastructure, its institutions and

[44] Because of the complexity of climate change and its mitigation, effective mitigation is unattainable should each actor act in its own self-interest (IPCC, 2014:4). According to the IPCC's Fifth Assessment Report (AR5), total anthropogenic GHG emissions have increased continuously between 1970 and 2010 (IPCC, 2014:4). Of this total amount, industrial processes and fossil fuel combustion were responsible for 78% of the total GHG increase from 1970 to 2010 (IPCC, 2014:5).

attitudes as well as its political culture, all of which are determined historically and by the availability of inexpensive domestic energy reserves making these elements path dependent (Grubb *et al.*, 1991:911).

In addition, to improve the theoretical framework, this section will elaborate on a concept that is central to the enhancement of the analytical coherence of this study. To suit the purposes of this study, the focus within energy policy will be on "the overarching goals that guide policy in a particular field" (Hall, 1993:278) which are understood in its broadest sense and will be integrated with the two levels of analysis to better understand the manner in which the goals of US energy policy and the goals of the UNFCCC are in congruence or not, and to suit the extensive historical analysis of this study. Since the 1970s, there are three goals that historically have influenced US energy policy, these being maintaining low energy costs for the enhancement of economic growth, ensuring a secure supply of energy and environmental protection (Yacobucci, 2016:1). Within energy policy, these goals have often been in conflict with one another, an exercise made more complex when trying to find areas of overlap with the goals of the UNFCCC. This will allow the study to trace the development of US energy policy and the congruence or incongruence of the goals of energy policy with those of the UNFCCC. By integrating these within the two levels of analysis, it is possible to indicate the multi-faceted interaction between the goals outlined above and their implications for US cooperation within the UNFCCC. It should be noted that goals and objectives are used interchangeably within this study and that at times mention will also be made of policy instruments where appropriate.

Within this context, most states consider energy as an issue of national security and design policies with this in mind (Katzenstein, 1976:35). However, policy-makers also have to continuously balance these considerations amongst other policy priorities, as well as the continuity of supply *vis-à-vis* any negative externalities. Moreover, they need to consider the relative power position of other nations with regards to scarce energy resources and their geographic concentration, the role of various internal government departments, energy as well as related policies, developments in energy innovation, the role of domestic and international energy companies as well as their and other countries' energy mix. The remainder of this section will further elaborate on energy policy.

Much like any policy area, it is no misnomer to observe that energy policy consists of numerous, often conflicting objectives (Surrey, 1992:209). In the most obvious sense, constructing an energy policy that is able to accommodate a number of competing policy

goals is daunting and involves trade-offs between competing aims (Bamberger, 2003:4). The lesson of this for theories of International Relations is that "Monocausal arguments founder on the fact that policy-makers usually have more than one set of reasons for their actions and see intimate linkages between different categories, which are often isolated in scholarly writing." (Bergsten *et al.*, 1975:5).

The concept of energy policy evokes a great deal of confusion (Lindberg, 1977:4). The traditional conceptualisation of the concept defines it as the activities carried out by government and industry in relation to a number of stages in the supply of energy sources such as petroleum, coal, electricity and natural gas (Lindberg, 1977:4). Over time, the conceptual boundaries have been widened in light of new challenges related to environmental constraints, income distribution, foreign policy as well as national power and security, and implications for the economic and political power within states (Lindberg, 1977:4). In a modern nation-state, achieving a coherent and rational energy policy is highly improbable due to the presence of conflicting interests and values, limited information, and constraints on government power (Lindberg, 1977:5). The complexity of this situation is captured by the following definition of energy policy,

> "Energy policy is understood here … to be a programmed strategy, based on the forecasts of energy consumption and assessments of supply capabilities, and delivered in a number of ways: regulation (price controls, import controls, etc.), market-orientated instruments, and by way of the services of government agencies and enterprises. Like all sectoral policies, energy policy subsumes other policy goals, including those of industrial, regional and social policy. It is also influenced by foreign policy objectives." (Finon, 1994:1).

A basic definition of energy policy refers to government intervention in energy markets for the supply of energy and "to improve the performance of energy markets" (Helm *et al.*, 1988:42; Helm, 1991:2). Such a definition, while fairly narrow and conservative, offers the advantage that it points to traditional concerns regarding macroeconomic stability and the need to consider the technical and economic details related to the demand and supply of these various fuels. However, what such a definition also brings to clarity is that energy policy is

also composed of numerous, often conflicting goals, related not only to economic and technical details, but also to other policies, especially those that are politicised in nature.

There are a number of changes to have occurred in the global energy system over the last four decades which had important implications for energy policy. These developments have been caused by the changing relationship between consuming and producing countries, new sources of consumption and production, the introduction of new fuels and technological breakthroughs. Likewise a number of constraints, especially related to environmental externalities, began to influence practices surrounding energy extraction and use. Some of these changes in the global energy system can be traced to the oil crisis of 1973 while others represent new sources of constraints and opportunities. The ability to make sense of change in energy systems is a complex activity because of the differences between various energy markets (Ratner and Glover, 2014:1). Most of the time, these markets operate independently of one another, although there are instances where they impact trends amongst one another, making energy markets interconnected but not entirely (Ratner and Glover, 2014:1).

Energy is a unique commodity, unlike many others, in that it is a prerequisite for the functioning of all sectors of the economy and human well-being (Helm *et al.*, 1988:42). Historically, energy policy has been concerned with fuel choice and security of supply (Helm, 1991:1). Within this framework, energy security has been the primary rationale for government intervention in energy policy (Finon, 1994:3). While, governments have been involved in decisions concerning fuel choice since the end of the Second World War; the oil shock of 1973 redefined energy policies to improve energy security (Finon, 1994:3). The consequence of this is that the energy policy framework in the post-war period has being inconsistent (Helm, 1991:2).While governments attempt to design policies that can mitigate against possible supply interruptions, the justification for government's intervention in fuel choice was typically also confounded with other political objectives such as national self-sufficiency while governments also distorted the price of energy to achieve a wide variety of social objectives making the design of energy policy a politicised process in terms of the objectives governments want to attain (Helm, 1991:3; Dilnot and Helm, 1987:26).

Nevertheless, the overarching rationale is that governments intervene in energy markets for security of supply because of energy's pervasive role and presence in the economy (Helm, 1991:4). If disruptions of energy services occur, its effects are experienced at every level of the economy since "energy is complementary to other economic activities" therefore supply

interruptions “cause disproportionate disruption in the economy” (Helm, 1991:4). The consequence of this characteristic is that any consequences of failure in the energy market exceed failure in other sectors (Helm, 1991:4). A variety of exogenous factors have influenced government’s stance on various fuels (Helm, 1991:2). In response to energy security threats, governments undertook different roles, sometimes regulatory, at others market-orientated, emphasising different fuels and technologies, both local and foreign in order to meet the challenge of energy security. The role of government was thus defined by the type of threat, how they understood the threat and the accompanying interpretation of the means to achieve energy security.

Although government intervention in energy policy is justified by appeals to energy security, understanding the precise influence and role of energy security in energy policy formulation and interaction amongst other policy goals is made more complicated by the fact that energy security is a normative concept. Different conceptualisations of energy security exist based on the particular geology, national objectives, technologies, fuels, ideology and geography of the institution or state that is being analysed or that sets policies in place to attain this goal (Sovacool and Brown, 2010:80; Ciuta, 2010:124; Sovacool, 2011:1). Nonetheless, the most widely accepted definition of energy security conceptualises it as “access to secure, adequate, reliable, and affordable energy supplies” (Dyer and Trombetta, 2013:300). Simultaneously, the concept has also not remained static but had to be able to make sense of new challenges which differ from epoch to epoch (Sovacool and Brown, 2010:80).

Part of the complexity in defining energy security may be linked to the politicised and multifaceted nature of energy itself (Sovacool, 2011:6). Most scholars adopt a particular definition of energy security as a means of justifying certain policies and actions (Sovacool, 2011:3). Because of its highly politicised nature, energy security is also susceptible to ideological manipulation (Valentine, 2011:59). This particular study emphasises the importance of the state and its interests as remaining the essential referent of energy security (Dyer and Trombetta, 2013: 297). However, what these various definitions of energy security illustrate is that they are closely linked to ideological motifs (Valentine, 2011:60). When policy-makers attempt to construct either a foreign or domestic policy that aims to ensure energy security, it quickly degenerates into an ideological contestation rather than a pragmatic policy.

2.6 A Criticism and Defence of Neoclassical Realism

Critics of realism would argue that realism should be relegated to the theoretical scrap heap of history. In the modern era, there is no place for realism's stance on *crude* power in a world of interdependent states, economic expansion, and where other actors beside the state have an impact on international behaviour. Transnational threats have also made obsolete realism's insistence on war and related military threats. However, a lot of the criticism[45] that has been directed towards realism often treats realism as a caricature rather than a thoroughly comprehensive and complex inter-theoretical debate.

There are a number of criticisms that have been levelled against neoclassical realism (Lindemann, 2014:35). The first is that classical realism includes domestic-level variables in an *ad hoc* manner (Lindemann, 2014:39). As a result, as a theoretical framework, it does not appear to be parsimonious and precise in its ability to predict outcomes that would enable the falsification of hypothesis (Lindemann, 2014:39). Critics further maintain that realism suffers from an inability to predict outcomes and is unable to anticipate change in international relations (Wohlforth, 1994/95:100 – 105). They further leverage that the behaviour exhibited by states internationally is inconsistent with realist theory (Wohlforth, 1994/95:100 – 105).

Neoclassical realism has been criticised for dealing with anomalies within the realist paradigm by redesigning realism in such a way that it loses its theoretical consistency thereby becoming less coherent, less distinctive and less determinate (Legro and Moravcsik, 1999:6). In this manner, critics point out that neoclassical realism has diluted the core assumptions of the realist paradigm (Legro and Moravcsik, 1999:6). By including state-society relations and ideational structures, which are assumed to be the traditional theoretical domain of liberalism and constructivism, critics point out that neoclassical realists deal with theoretical anomalies by restructuring realism in a manner that is inconsistent with its overall theoretical stance (Legro and Morvcsik, 1999:6). In contrast, proponents argue that neoclassical realism is a necessary theoretical advancement of structural realism and that no theory has sole use of any variables (Rathbun, 2008:294). Rather, variables should be used in such a way so as to fit the overall logic of the theoretical framework (Rathbun, 2008). They argue that domestic structures and ideas form an important element in a state's ability to advance its latent material power (Rathbun, 2008:296). While states act as unitary and rational actors under the

[45] See Ashley (1984) and Vasquez (1997). For the strongest defence of realism against criticism based on caricature see Gilpin (1984).

influence of the structure of the international system in response to a threat that undermines their security, states' policies will be influenced by other factors should a threat of lesser magnitude be present (Rathbun, 2008:307).

Regarding international cooperation, liberal institutionalists would argue that international cooperation may be enhanced through international institutions (Grieco, 1988:486). However, a major constraint on the abilities of states to cooperate that is not fully taken into consideration by liberal institutionalism is the importance of relative gains (Grieco, 1988: 487). Thus, while liberal institutionalists would argue that states can cooperate when international institutions reduce the risk of cheating, a realist framework would highlight that states are more concerned about relative gains because of the implications for their security (Grieco, 1988:487).

Neoclassical realists like other realists insist that the state is the main actor on the international stage. However, unlike structural realists they do not black-box the state but instead indicate how the influence of vested interests and ideology can often temper with the notion of the national interest and policy at the expense of the state's security and wider notions of the social good. Perhaps a more difficult question relates to how neoclassical realism treats non-traditional security threats such as energy policy and climate change. As non-military threats, what position do these phenomena occupy in the neoclassical realist framework? While it may be argued that energy is not a traditional threat, it is still widely acknowledged to be a matter of national security, while climate change threatens the very foundations that primordial human needs are based on, namely food, water and a secure habitation. Neoclassical realism is better suited for questions concerning political economy because of its incorporation of vested interests, ideology and domestic structures which can influence energy policy's stance on issues of security and mitigation as well as a state's position in multilateral negotiations. In addition, neoclassical realism[46] is more suitable for qualitative and historical research (Ripsman, Taliaferro and Lobell, 2016:109, 110) as highlighted by the studies done by Mastanduno (1991) and Kropatcheva (2014).

Although, as critics point out, there is the risk that variables are combined and analysed in an arbitrary manner, its adaptability allows this theoretical framework to identify intricate,

[46] It should be noted that as this is an interdisciplinary, historical study, neoclassical realism has been adapted for the purposes of this study and used differently to what may be expected in a traditional political science and IR approach.

multifaceted interactions such as the interaction between US energy policy and its position in the UNFCCC. To avoid a random selection of variables, unit-level variables based on the federal level structure and differing perceptions are integrated by tracing the link between a) the goals of energy policy and b) the US position within the UNFCCC, along with the impact of the distribution of power at the system-level on the goals of US energy policy and its position in the UNFCCC. It is therefore possible to trace the historical development of US energy policy and its interaction with the US position within the UNFCCC. As the theoretical framework facilitates the identification of nuanced interactions, it is able to reveal the opportunities, challenges and contradictions of reconciling US energy policy and the UNFCCC position within the US federal political context and executive[47] policy-makers' perception regarding the cost accrued to the US economy. This relates to the estimation of the costs, benefits and trade-offs between mitigation and other policy goals within the ideational divide in the US political system over these issues.

The strength of neoclassical realism is its emphasis that it is the combination of the structural-level, that is the distribution of power in the international system, and unit-level variables, the variables found at the state-level, as influencing interstate dynamics (Ripsman, 2017). It may be worthwhile to provide a more concise overview of these two aspects of neoclassical realism. As previously discussed, neorealism places emphasis on the distribution of power in the international system as determining interstate dynamics. The distribution of power in the international system is the most essential determinant of interstate behaviour as it influences the constraints and opportunities that policy-makers will respond to (Ripsman, 2017). However, the opportunities and constraints provide by the international system are not always sufficiently clear. As Ripsman (2017) summarises, "This level of flexibility assumes that states face no domestic constraints when making national security decisions.". Thereby, it is necessary to understand how the influence of the distribution of power is filtered through unit-level variables. As such, the necessity of structural explanations as argued by Kenneth Waltz, within neorealism, is summarised by Ripsman (2017) as follows:

[47] It should be noted that when discussing the executive administration this is in reference to policy-makers within the executive branch, which also broadly includes the administrative apparatus (Rockman, 2009:1; Waterman, 2009:5; Rudalevige, 2009:10; Krause, 2009:74). In the thesis, executive administration, executive branch and the executive are used interchangeably.

> "Explanations of patterns of international behavior, such as the recurrence of war, that were based on conceptions of human nature or the nature of states (his first and second images of international politics) were, at best, incomplete, as human nature theories could not explain why war does not always occur, while theories of national difference could not explain why states with different political systems behave similarly in similar circumstances. Furthermore, first or second image theories were insufficient because the prescriptions that followed from them required changes in the relations between states, which implies that the problems themselves stemmed from the nature of the international system, his third image. In contrast, third image theories, focusing on anarchy in the international system and its consequences for states, were the most efficient explanations of war and other macropolitical outcomes between states, and they were sufficient as they required no reference to the types of states involved, human nature, or the particular leaders of particular states."

Over time, change in the distribution of power and capabilities in the international system will alter interstate dynamics (Ripsman, 2017; Kirshner: 2010:54). The resultant security implications will compel states to pursue alliances against rising competitors to balance against them so as to ensure their survival and security (Ripsman, 2017). States will therefore implement those foreign policies that will enhance their position within the structure of the international system, "Since their very survival is at stake if they fail to secure themselves properly from without in an anarchic international system, where the slightest misstep could lead to defeat in war, the incentives are extremely high for states to focus on external stimuli and craft foreign policies to respond to them appropriately." (Ripsman, 2017). Within an anarchic international system where the power relations between states alter, security and power are the ultimate goals of foreign policy (Kirshner, 2010:55; Walt, 2017). Security, which is defined in a narrow sense in realist theory, is understood as referring to the state and its territorial integrity whereby the state is capable of defending itself (Walt, 2017). Given that the international system is anarchic, states must rely on self-help to ensure their security since there is no other authority that would be able to promote the security of the state (Walt, 2017). Although realists may offer a number of explanations for the scarcity of security in international relations ranging from the conflict of interest amongst states and differences in domestic political systems in addition to the anarchic structure of the international system,

they point out that numerous factors can also increase or decrease this security problem (Walt, 2017). Moreover, states will respond to a change in the distribution of power because of the potential impact thereof for their security (Walt, 2017).

Neoclassical realism shares neorealism's assumption that states primarily respond to the threats and opportunities presented by the structure of the international system (Ripsman, 2017). Yet, neoclassical realism indicates that the influence of the structure of the international system, that is the distribution of power therein, must be filtered through unit-level variables (Ripsman, 2017). States are not always capable of perceiving international threats and opportunities accurately (Ripsman, 2017). While states may be principally aware of the structure of the international system, in and of itself, structural variables alone do not influence interstate behaviour and dynamics, at most these are permissive causes (Kirshner, 2010:56). Hence, although aware and responding to structural constraints and opportunities, policy-makers must still determine the manner in which they will attain their goals and how they will respond to constraints (Kirshner, 2010:57). As such Kirshner (2010:57) summaries this dynamic with the following depiction, "Rather classical realists also understand that state behavior is shaped by the lessons of history (right or wrong), ideas (accurate or not), ideology (good or bad), and that states make choices influenced by fear, vulnerability, and hubris, usually in the context of considerable uncertainty." Power is thus an essential aspect of a state's ability to attain their objectives and meet the security challenge posed by competitors (Kirshner, 2010:58).

Neoclassical realism relies on the complex understanding of the state as illustrated in classical realism; however, while maintaining the emphasis on the primary structural constrains and opportunities imposed by the distribution of power in the international system (Lobell, Ripsman and Taliaferro, 2009:23). Neoclassical realism defines the state as a set of institutions located within a "geographically bounded territory" which has the "monopoly on legitimate rule within that defined territory. Neoclassical realism presents a 'top-down' conception of the state, which means systemic forces ultimately drive external behaviour." (Lobell, Ripsman and Taliaferro, 2009:25). Imperatively, the structure of the state, in the sense of the institutional make-up and relations between the executive and legislature, have an important influence on the kinds of policies that may be enacted in response to the changing distribution of power (Lobell, Ripsman and Taliaferro, 2009:27). Since this theory is essential to understanding the US domestic system, a brief outline is provided of the key aspects of the US political system. The United States of America has a federal political system whereby its government is divided into three branches consisting of the executive,

judicial and legislative branches with each branch of government limiting the power of the other (CAR, 2002:11 – 12; CAR, 2010:10). The President's power is limited relative to Congress under Article II, Section 2, Clause 2 of the Constitution (The Constitution of the United States, 2007:8; Skodvin and Andresen, 2009; Depledge, 2005:2). As a result, in order to ratify treaties, the president must have the support of two-thirds of the US Senate (Hovi *et al*., 2010:4; Depledge, 2005:2; Bang *et al*., 2012:756).

Within the USA's federal system, the US Constitution provides little overview of the precise interactions between the executive and Congress in regards to the manner in which administrative agencies may be established (Garvey and Sheffner, 2018:1). Nevertheless, Congress has the ability to create and influence the federal bureaucracy under Article I of the Constitution, Article II, Section 2 and Article I, Section 8, and therefore "Acting pursuant to its broad constitutional authority, Congress may create federal agencies and individual offices within those agencies, design agencies' basic structures and operations, and prescribe, subject to certain constitutional limitations, how those holding such offices are appointed and removed" (Garvey and Sheffner, 2018:1). Most Congressional power over these agencies originates from Congress's ability to enact legislation and yet, likewise, the Constitution also enforces limitations on Congressional power through "express grants of power in the Constitution, which thereby establish internal constraints on the federal government's authority" whereby the Constitution allocates unto Congress a set of very defined powers, and the Constitution and relevant case law further impose limitations on Congressional power *vis-à-vis* the states (Nolan *et al*., 2018:2; Thomas, 2013:1). In relation to the particular subject matter of the thesis, environmental protection programmes may be designed as well as implemented at all levels of government, although the different government agencies, state authorities, the executive and Congress do have different roles (Congressional Budget Office, 1988).

As has been expanded in section 2.5.3, perception is a necessary element of the neoclassical realist framework. Perception is imperative since it influences the manner in which policy-makers understand complicated information (Eun, 2013:373). Moreover, as has been discussed, ideology, understood to be an individual's orientation towards issue areas through a set of political beliefs, influences perception (Sartori, 1969:400). Ideology therefore influences policy-makers' understanding of the compatibility between various policy goals, especially the compatibility between environmental regulation and economic growth, where the cost for US energy is an important consideration (Sartori, 1969:400). While the traditional

definition of perception in neoclassical realism is understood to be policy-makers' assessment of the distribution of power in the international system (Ripsman, 2011), the thesis has adapted this definition of "perception". Since the study focuses on energy policy and the US position in the UNFCCC, the reference to "narrow rational calculation" and the costs of different kinds of decisions within perception relates to the calculation by policy-makers of the compatibility between various policy goals, specifically the compatibility between environmental regulation and economic growth, where the cost for US energy is an important consideration and how it will influence the competitiveness and position of the USA relative to other states in the international distribution of power, with the importance of the ideology of the administration therein highlighting their approach to the compatibility between the goals of environmental regulation and economic growth (Oskanian, 2016). The definition of perception as "narrow rational calculation" (Brooks and Wohlforth, 2002:97) relates to the costs of energy and implies that policy-makers approach policy problems as rational actors that have a set of goals that they wish to attain albeit with limited information. It has been concluded within a number of analyses that within the US political system, the ideological position of the Republican and Democrat parties impacts energy policy (Adelman and Spence, 2017; Hess *et al.*, 2016:20) and climate change politics (McCright and Dunlap, 2011; Gromet *et al*., 2013).

The dependent variable in this analysis is the interaction between US energy policy and its position in the UNFCCC as is observed in chapters 4 to 7. This interaction refers to the calculation by policy-makers of the compatibility between various policy goals, specifically the compatibility between environmental regulation and economic growth, where the cost for US energy is an important consideration and how it will influence the competitiveness and position of the USA relative to other states in the international distribution of power, with the impact of the administration's ideological position impacting their stance towards the compatibility between the goals of environmental regulation and economic growth (Oskanian, 2016).

2.7 Conclusion

Theories are integral to any attempt to understand how the world functions. They are constantly present, whether explicitly or implicitly, in any consideration of what appear to be a bewildering array of disparate events. Realism, as the dominant and the oldest theoretical paradigm in International Relations, has faced alterations in the twentieth century that would enhance the ability of the theory to account for international behaviour and also advance the

debate about its efficacy and relevance in International Relations. In spite of criticism, realism has proven to have a tenacious grip as a theoretical construct. At its core, realism presents a world wherein states are the most important actors who are both unitary and rational, must pursue power and the national interest, while the international system is marked by the absence of a hierarchic power structure defining the system as anarchic, which stimulates competition for security and power amongst states (Donnelly, 2005: 29 - 30).

Neoclassical realism, which incorporates both structural- and unit-level factors, presents a more nuanced understanding of policy outcomes. Policy-makers are simultaneously faced with pressure from the international system as well as domestic factors. Their ability to navigate this terrain will be influenced by their interpretation of threats and opportunities as well as the conflicting pressures exerted by the domestic and international spheres. A coherent energy policy is an important element of a state's material capabilities. Because of the importance of energy input into all social and economic processes, an adequate energy policy framework is crucial if states are to amplify their strength and power and maintain their security in the face of challengers, wherein the mitigation of climate change is a further complicating factor. Because energy policy consists of goals which compete with and at times contradict other policy objectives, decision-makers have to make trade-offs. Neoclassical realism indicates the manner in which policy-makers interpret threats and opportunities and their abilities to respond to these. Vested interests, ideology, the structure of the political system, the path dependence of energy technology as well as alterations in economic and technological systems will influence and interfere in policy-makers' ability to design an energy and foreign policy that can respond to these challenges – although it should be noted that these are outside the scope of the subject matter. Neoclassical realism, with its incorporation of these influences, can offer a more intricate overview of the interplay of factors found at the structural- and unit-levels found within the subject matter being analysed. Hence, neoclassical realism is argued to be the most optimal theoretical approach to be used in this thesis.

Chapter 3

The Emergence and Development of US Energy Policy up to 1989: Petroleum, Hegemonic Ascent and Crises

3.1 Introduction

The USA occupies an essential role in and its energy policy has important implications for the global energy system (Yergin, 1979:84). For decades it has been one of the biggest consumers and producers of energy resources such as petroleum, coal as well as natural gas, and pioneered renewable energy technologies. It also had a firm foothold in the global petroleum system with the commodity introduced as a key element of the global political economy, and by extension the USA's role in the Middle East and the rest of the world up to the 1973 oil crisis. Throughout the twentieth century, petroleum and fossil fuels were paramount for the USA's economic growth. Understandably, petroleum became a defining feature of US energy policy to the detriment of alternative fuel choices, while policy-makers' fears regarding US dependence on imported petroleum increased. Since US hegemony depended on its role in the supply of cheap Middle Eastern petroleum, this dependence on petroleum was maintained. However, the USA's growing dependency on foreign petroleum has been met with unease and associated as a threat to national security by various administrations since the end of the Second World War due to the economic disruption this incurs and the risks that this poses to US national security. During this era, since the US government had to be concerned with its domestic market, specifically low energy prices for consumers and industries, but also maintain a role in the global energy system which was petroleum-based, US energy policy developed a dual nature creating a set of contradictions.

Up to the 1970s, the United States had what appeared to be abundant domestic energy resources, to which the peripheral role of the federal government in energy policy formulation suited the context. This all changed with the oil shocks of the 1970s. The Yom Kippur War in October 1973 was the watershed moment that altered the country's energy context into a crisis by creating the most severe energy shortage that the United States experienced since the Second World War, while the price of petroleum would quadruple between 1973 and 1974. Various administrations have struggled to enact policies that could bear the higher costs that this accrued to consumers and the associated decrease in the competitiveness of US industries while interacting with Congress over these issues within the

US federal political system. The rise of increased federal regulation in energy policy became a highly politicised and contested issue. With the already dire situation of the 1970s, environmental considerations further complicated attempts to ameliorate this situation.

All these issues would play out within the kaleidoscope that is American politics. Beginning with Richard Nixon, since 1973, there were a series of legislative proposals issued to reduce petroleum imports, and enhance its substitutes, while increasing energy efficiency standards (Bohi and Toman, 1993:1093). Although these measures evolved with the Ford and Carter administrations; however, the Reagan administration once again enacted a series of measures reminiscent of the energy policies of the pre-1973 era. As such, the development of the USA's energy policy progressed around a series of contested ideas; that is while certain teleological goals were present; there was no set method that was the obvious policy choice in this attainment. The sheer scale of choice surrounding energy resources makes energy policy a particularly daunting challenge. The task for each successive administration became increasingly complex as each era presents increasingly multi-dimensional challenges to energy policy. Therewith, an energy policy reflects the particular ideas as well as challenges of each era. Fundamentally, US energy policy cannot be understood in isolation from its hegemonic position, and the ideational division found within its domestic political system. This historical chapter traces the origins and development of the USA's domestic energy policy and the rise of its hegemonic position in the global petroleum system. It then illustrates how the USA's energy policy reacted to new events and challenges and the associated issues that complicated this laying the foundation to assist in understanding subsequent administrations. Towards this aim, this chapter proceeds with a discussion of the concept of energy policy, followed by a synopsis of the main assumptions that US energy policy has been based on. It then traces a historical overview of the development of US energy policy up to 1989.

3.2.2 The Assumptions Guiding US Energy Policy

Over the twentieth century, the United States has been characterised by remarkable economic growth and prosperity, even though it has lacked an industrial policy and a comprehensive federal energy policy, yet it has attained an unparalleled level of economic and industrial strength in spite of their absence (Tomain, 2007:1202). Historically, the USA did not have a federal energy policy which connected "various energy industries with each other…the development of natural resources throughout their various fuel cycles." (Tomain, 2007:1203).

Moreover, energy policy was not coordinated with environmental policy in spite of the adverse environmental consequences that are associated with energy consumption and use, the former being mostly concerned with production and the latter with protection, although carefully designed policies may find congruence between the two, however many times there have been trade-offs (Tomain, 2007:1203; Landsberg, 1980:77; Kelliher and Farinella, 2009:621 - 623). The traditional perception of policy-makers in the USA was that energy production and correlated economic growth was incompatible with environmental protection (Melosi, 1987:167). Tomain[48] (2007:1203) asserts that the USA's energy policy, rather than being comprehensive and coordinated, is founded on three economic assumptions:

i. Private industry, markets and capital are the basis for innovation and wealth, therefore competition rather than government regulation is required.
ii. There is a correlation between energy production and economic productivity therefore, the more energy is produced and consumed, the stronger the economy will be.
iii. Economies of scale are needed so that more energy will be produced and at the lowest price, i.e. "bigger is better". The price of energy would decrease as refineries and utilities increased in size.

These assumptions have interacted with three issues that have been contested in US energy policy: the attainment and mix of energy sources, the redistribution of income and costs, and the role of government and regulation, leading to policy impasse (Yergin, 1979: 84, 89 – 90; Landsberg, 1980:77; Hodel, 1991:10). US energy policy has thus been challenged by competing ideational frameworks in regards to how best to secure economic growth and security (Landsberg, 1980:790). While, these assumptions have guided US energy policy and have strengthened the US economy to a degree, since the 1970s these assumptions have been increasingly challenged by a number of events.

Under each administration, the USA's energy policy had been politicised for a particular set of reasons. What may be surmised is that new technologies, fuels, nascent industries and new patterns of consumption altered patterns of economic growth allowing states to rise and fall. Moe (2007:1) goes on to explain that, "Small differences in growth rates between countries will in the long term gravely change the balance of power between them." (Moe, 2007). In

[48] See also Landsberg, 1980:76 – 78 and Hodel, 1991:10.

order to comprehend the nuances of the above-discussion, these ideas will be applied to the development of energy policy in US history.

3.3 US Energy Policy in the Pre-1973 Era

The origins of US energy policy can be traced to the beginning of the country's Industrial Revolution which laid the foundation for the regulation of the production and distribution of its resources (Tomain, 1990:356). These regulations were created in response to the emergence of nascent energy markets and industries which originated in the mid-nineteenth century (Tomain, 1990:356). During this period there emerged the relationship between federal regulation and private energy industries which would characterise US energy policy over the next century (Tomain, 1990:356). However, energy was initially produced at the local and regional levels at the end of the nineteenth century which ensured that decisions regarding policies were carried out at the local and state levels (Tomain, 1990:357).

The USA did not have a policy framework that united the various energy industries and in spite of efforts to the contrary, this policy framework never materialised into a comprehensive and coordinated federal energy policy (Tomain, 2007:1201, 1203). This is ironic as the United States' economic growth and prosperity since its industrialisation in the mid-nineteenth century rested on the consumption of abundant fossil fuel energy, yet no coherent policy existed that could successfully maintain this nor establish a long-term prospect that could accommodate the various contrasts of the USA's energy legislation (Tomain, 2007:1201). Up to the 1970s, cheap petroleum for economic growth was the centre piece of US domestic and foreign energy policy. The introduction of petroleum in military, transportation and economic activities corresponded to the rise of US hegemony.

At the start of the twentieth century, American society began to be increasingly characterised by the assimilation of "large-scale, capital-intensive, centralised, interstate energy production and distribution, first in oil, then in electricity" (Tomain, 1990:358). Two major changes occurred simultaneously during this particular era, the USA transitioned from coal[49] to petroleum[50], while the second transition was characterised by "a transition from local and

[49] In the nineteenth century, coal was instrumental in fuelling the ascent of domestic industries in the USA when it was used for power and heating, and subsequently for the generation of electricity (O'Connor and Cleveland, 2014:7975).

[50] Energy consumption in the United States altered from 70% wood in 1870, to 70% coal in 1900, to 70% gas and petroleum in 1960 (O'Connor, 2010:3). This is articulated in relative terms, in absolute terms, with the

state to regional and national markets" which paralleled the changes occurring in energy industries (Tomain, 1990:357).

3.3.1 Structural Influences

Technological innovation and economic trends play important roles in driving interstate competition as states compete for power and security within the anarchic international system. While such trends begin at the unit level, they have important implications for the distribution of power between states. In 1911, Winston Churchill, who at the time was the United Kingdom's Home Secretary, shifted the United Kingdom's navy from coal to petroleum giving it a military advantage over Germany, at the time their main European rival (Yergin, 1991:11). This decision made petroleum a strategic element, and a vital component of modern warfare. This had a number of far-reaching consequences that in many ways shaped the twentieth century. The introduction of new technologies in the beginning of the twentieth century had important implications for the expansion of military strategies and operations, as well as social development. Aside from these military considerations, in the late nineteenth century, the creation of the internal combustion engine had been pivotal in making petroleum a necessary input for modern transportation (Smil, 1994:168). The internal combustion engine and diesel adaptations introduced the necessity of accessing petroleum and maintaining its continuous supply in order to power these technologies and succeed in military operations (DeNovo, 1955:641).

Such dynamics need to be situated within the logic of anarchy which compels states to compete against one another in order to ascend in the international system and to ensure security for themselves through self-help. Led by technological and military momentum, it was during this period, following in the footsteps of the British under the leadership of Winston Churchill, that the USA under the leadership of president Woodrow Wilson

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exception of wood, US consumption of coal, gas and petroleum has increased over the past century for all fuels (Ratner and Glover, 2014). For example, petroleum made up 40% of the total energy consumed in the USA since 1950, a figure that has remained largely unchanged (Ratner and Glover, 2014:6). The consumption of natural gas, by contrast, was four times greater in 2013 than in 1950 (Ratner and Glover, 2014:24). The consumption of coal on the other hand has more than doubled since 1950 (Ratner and Glover, 2014:28). In 1950, nearly 25% of the residential and commercial sectors consumed coal, a figure which dropped to 1% by 1980 (Ratner and Glover, 2014:28). The electric power sector which consumed less than a fifth of coal combusted in 1950 represented 90% of coal consumption by 2013 (Ratner and Glover, 2014:28). This consumption is further differentiated amongst sectors (Ratner and Glover, 2014:7).

converted its navy fleet to petroleum (DeNovo, 1955:641; 656). While US policy-makers were concerned about the future supply of petroleum for the navy, at this point these worries remained marginal as the United States was the only industrialised country in the world that had significant domestic reserves of petroleum (DeNovo, 1955:646). Instead, since sufficient reserves existed, the issue of how to procure these at an adequate price for the navy was a significant challenge that US policy-makers faced (DeNovo, 1955:649).

These considerations would play a decisive role in the rise of US hegemony. Although the United States had the world's largest economy since the 1880s, it was not until the end of the Second World War that it emerged as a hegemonic power having far greater material capabilities in the form of natural resources and an industrial base, in comparison to its European counterparts (Zakaria, 2008:26, Clark, 2009:24; Ikenberry, 1989:377 – 378). The interstate system is dynamic[51], marked as it is by the uneven growth of power amongst states[52] which defines this change in relative hierarchic power as the driving force of interstate interactions (Gilpin, 1988:591). Within the international system that is organised as a hierarchic order amongst states based on their power capabilities, a hegemon[53] can be defined as a state which is an unchallenged dominant power (Gilpin, 1988:592). Within this rise and fall of states, and the unique attainment of hegemonic status, the sources of state power are not static, they can be transformed (Gilpin, 1988:603). A hegemonic state establishes the institutions and rules of governance within the international system for a particular era alongside the values and ideas that these will be based on thanks to its superior power capabilities (Ikenberry, 1989:377 – 378). In the post-war era, the United States used its hegemonic power to establish the rules and institutions of the international political and economic order known as the Bretton Woods system as a means to address the problems that led to the Great Depression and the Second World War (Ikenberry, 1989:380). Thereby, US

[51] Change in the international system refers to the alteration of the hierarchy of states within that system and their ensuing patterns of relations (Gilpin, 1988:596). Within the international system, systemic change is therefore the inequitable growth of power amongst the dominant states therein (Gilpin, 1988:596).

[52] The structure of the international system is defined as the distribution of power amongst states (Gilpin, 1988:592).

[53] Contrast this definition to the critical position assumed by World Systems Theory which defines a hegemon as a state that is economically and militarily more powerful than other core states within a capitalist system that is based on the accumulation of capital and crucially its "leadership is also an ideology that legitimates domination and exploitation." (Chase-Dunn, 1994:362).

hegemony established a new system of interstate dynamics and interactions based on its leadership,

> "The US became an active institution-builder after World War II - not as an alternative to US supremacy, but as an expression of it. This rather novel strategy of hegemony rested upon a rejection of both America's own isolationist past and the imperialist precedent set by Great Britain during its nineteenth-century period of international ascendancy. Hegemony is a type of authority in which the privileged position of the leading state rests not upon coercion alone, but also upon the institutionalized consent of other states. As Bruce Cronin (2001:107) puts it: ''hegemony is a form of leadership, not domination.'' US policymakers sought to channel the exercise of American power through a set of rules and institutions perceived as broadly legitimate by most participating states." (Skidmore, 2005:209).

The rise of US hegemony occurred in the context the international distribution of power characterised by a bipolar system which emerged after the Second World War, with its main rival being the Union of Soviet Socialist Republics (USSR) which would influence alliance structures and interstate competition (Podobnik, 2006:93). The end of the European-centred international system and the emergence of the bipolar Cold War structure and its alliance formation provided the framework within which the dynamics of the global political economy operated in and which further complicated these energy relations as the United States and the USSR vied for dominance in their respective spheres - a geopolitical rivalry which also played out in the energy system (Gilpin, 2001:5). In order to establish a stable alliance consisting of western European countries and Japan[54] *vis-à-vis* the Soviet Union, the USA had to ensure stable economic growth in its alliance partners which required supplying these countries with cheap petroleum (Podobnik, 2006:93). Under this new petroleum-dominated system, the once coal-dependent economies of Western Europe and Japan became dependent on petroleum and petroleum became the dominant primary energy source throughout those countries not dominated by the Soviet Union (Odell, 1994:209). The

[54] The Bretton Woods System, the economic order introduced in the aftermath of the Second World War, was dependent predominantly on the cheap supply of energy sources, mainly petroleum, to fuel economic growth in the post-war alliance of Europe, Japan and the United States.

countries of the eastern bloc were likewise supported by the Soviet Union to solidify Soviet control over the alliance (Podobnik, 2006:93). As a hegemonic state, the USA would occupy a strategic military and economic role in this regard as it protected the flow of Middle Eastern petroleum to its allies (Singer, 2008:1). Thereafter, with the end of the Second World War, energy consumption drastically increased relative to other periods.

Per consequence, in the post-World War Two era, petroleum became associated with the rise of American hegemony (Odell, 1986:27). By providing sufficient stability at the international level, American hegemony was able to facilitate the necessary investment in infrastructure as well as the transportation of these energy resources (Podobnik, 2006: 92 - 93). Within this energy system, economics, foreign policy and military power would converge with the USA emerging as the facilitator of the unrestricted, abundant and cheap supply of petroleum on the global market as both an expression and enhancement of its hegemony (Yergin, 1991:410). Since states compete not only militarily but also economically to maintain their security and power within an anarchic international system, with this military and economic competition often reinforcing one another, such a configuration would allow US military and economic power to converge allowing the two to be fundamental for its hegemonic rise as it oversaw the cheap supply of Middle Eastern petroleum to its allies to solidify its power and influence within this alliance structure (Waltz, 1993:45).

American consumption of foreign petroleum would also begin to increase during this period, while its domestic production diminished, ultimately reaching a plateau in 1972 (Klare, 2004(a):10). While foreign petroleum would make up only ten percent of US consumption in the 1950s, this number would increase to eighteen percent in the 1960s and would double in the 1970s (Klare, 2004(a):10). By the 1970s, the United States depended on foreign petroleum in order to maintain economic growth[55] (Klare, 2004(a):10). As US petroleum imports grew in the post-War years, subsequent administrations would begin to view this growing dependency with unease and associate it as a threat to national security; thereby energy security and national security would be forged together in American military and foreign policy (Klare, 2004(a):12). This spurred the US government to employ strategies to maintain a continuous supply of petroleum from the Middle East to the United States and its

[55] The puzzle that the 1973 and 1979 oil crises presented was that the oil shocks were not so much caused by a lack of availability or even a reduction in the global supply of petroleum, but rather the price at which petroleum was set by producers (Bohi, 1987:21). The price of petroleum, rather than its availability, which was characterised by imports of foreign sources of petroleum, caused the oil shocks of the era.

allies which was enabled by its hegemonic position (Klare, 2004(a):12). Since growth in petroleum imports and regional security concerns were deemed to be inevitable, the Roosevelt administration established strategic military and diplomatic relations with Saudi Arabia and a continuous military presence in the Persian Gulf which was secured by means of "collective defence agreements" which were structured to insulate the region from Soviet interference (Klare, 2004(a):12; Odell, 1986: 32). As the Cold War heated up, Presidents Harry S. Truman and Dwight D. Eisenhower would issue the Truman and Eisenhower Doctrines respectively as a means to secure the Persian Gulf's petroleum as part of their Cold War strategy (Klare, 2004(a):12). Amid concerns over rising inexpensive petroleum imports, the Eisenhower administration introduced a quota system between 1959 and 1973, justified as a matter of national security, in order to protect domestic interests (Ross, 2013; Yang, 1977:4; Bohi and Toman, 1993:1093). Petroleum thus became the USA's greatest strength, but also its greatest weakness.

Although domestic influences would have an important impact, the USA's approach to its role in the global petroleum system was driven by external causes (Waltz, 1993:50) – to attain the status of hegemony, that is its role in the global energy system were used to attain its global objectives. It allowed the United States to secure a strategic influence over the Middle East, as well as over its allies in Europe and Japan. This occurred within the bipolar order of the Cold War, wherein competition for resources and military as well as ideological superiority were characteristics of the competition between the USA and the Soviet Union, a zero-sum game, within the international system (Waltz, 1993:50).

By the mid-Twentieth century, petroleum emerged as a vital component of economic growth and military power. Within the economic, military and technological configuration of the era, petroleum became a necessary component of US hegemonic rise through its enhancement of US military and economic capabilities, as well as its influence over the Cold War alliance structure, and per consequence the need to maintain the continuous supply of petroleum became a policy priority. Although it had domestic reserves, US imports began increasing and petroleum became a source of vulnerability as the USA's dependence began to increase on this resource, a policy concern made more acute within the bipolar order of the Cold War, and the rivalry between the USA and the Soviet Union therein within the anarchic international system and the consequences thereof for US security and power, as the USA had to maintain its hegemony while guaranteeing security for itself through the logic of self-help. It was the USA's rise as a hegemon in the post-World War Two setting that facilitated

its influence over both the petroleum system and likewise the interstate system within a bipolar rivalry. Petroleum was thus imperative for American hegemony and its pursuit and maintenance of power in the anarchic international system through military and economic means. US hegemony, and the power it wielded vis-à-vis other states, thus spurred and also enabled the USA to develop and attain its objectives, the continuous supply of inexpensive petroleum to itself and its allies. Yet, the same resource that facilitated US power internationally became a key vulnerability with increasingly dwindling domestic supplies and a growing dependence on foreign sources of petroleum. This would have important implications for subsequent administrations and their policies.

3.3.2 Domestic Influences

With the strategic importance of petroleum established, since the 1930s, the global petroleum industry was controlled by a small group of American and European petroleum companies, collectively known as the Seven Sisters, which monopolised the extraction and production of petroleum (Ross, 2013; Odell, 1994:208). During the inter- and post-war period these companies dominated the market and were able to stabilise the global petroleum industry (Ross, 2013). It was during this era that a close relationship was forged between the US petroleum industry and American national interests as the inexpensive access to and supply of petroleum became synonymous with security in US foreign policy thus enhancing the notion of the importance of the access to and supply of this cheap petroleum for US power and security for its military and economy within an anarchic international system (Odell, 1986:27; Yergin, 1991:410, 412).

Before the oil crisis of 1973, US oil companies had invested in excess of $10 000 million in the global petroleum industry which presented a third of US FDI at the time (Odell, 1986:27). By becoming instrumental to US power and security in an anarchic system dominated by a bipolar rivalry and alliance structure, any threat to this investment was *inter alia* viewed as a threat to US national interests as well (Odell, 1986:27). This motivated the strategic relationship between the US government and American petroleum companies which was structured by the US government to achieve three related objectives internationally: the first was to achieve the security of global petroleum supplies for the US domestic market as well as for its allies; the second was securing the economic stability of American allies, while the third was selling US cultural values for ideological purposes (Odell, 1986:28). These conditions meant that international petroleum companies in the pre-1973 era were able to

carry out their operations around the world under the blanket of US diplomatic and military protection (Odell, 1986:219; Yergin, 1991:410, 412). This had considerable strategic and economic advantages for the US government. In the USA, these petroleum companies were instrumental in accumulating considerable wealth and commercial breakthroughs by the start of the twentieth century (Podobnik, 2006:47). It is hardly surprising that within this petroleum system, the US Department of State also engaged in diplomatic efforts to promote US ambitions and interests relating to petroleum and related strategic interests in the Middle East and Western Europe (Odell, 1994: 208). Moreover, the US government supported its petroleum companies against other European powers and their companies to protect US strategic interests, and per consequence power, against potential rivals (Odell, 1994: 208).

Since economic strength played such a critical role in the rise of US hegemony, decision-makers would have to be especially cognisant of those factors that would enhance the competitiveness of the US economy. This had implications not only internationally as has been discussed, but also domestically. Alongside these international petroleum companies, domestically, in the post-War period, the Texas Railroad Commission[56] played an important role in stabilising petroleum prices and in 1955 accounted for approximately 42 percent of the USA's petroleum production (Hamilton, 1985:99). In the immediate post-War years, the Texas Railroad Commission and other associated state agencies were effective in their ability to balance the supply and demand of petroleum arising from cyclical economic factors and the variability in petroleum discoveries and imports (Hamilton, 1985:100). However, this pattern could not be sustained indefinitely and by 1947 the petroleum industry was experiencing severe under-capacity in petroleum transportation and drill-wells due to the long lead times involved in the investment of petroleum (Hamilton, 1985:100). The result of this was that by 1948-1949, the USA was to experience its first major recession since the end of the War (Hamilton, 1985:100). In addition to these domestic pressures, the United States was also an integral actor in the global petroleum market and used its policy to limit production in

[56] In the 1930s, the rule of capture resulted in wasteful and competitive petroleum production which led to the Texas Railroad Commission "controlling allowable oil production" (Baker, 2010:60). However, producers and refiners began producing and shipping petroleum to evade the restrictions set by the TRC, more state regulations and laws were established to prohibit this (Baker, 2010:60). In spite of these efforts, these laws and regulations were insufficient to curtail the above-mentioned activities and thus in 1935; the Connolly Hot Oil Act was established to prevent the shipment of petroleum outside of the TRC system (Baker, 2010:60).

the East Texas oil fields in order to "stabilize global oil markets" - a position that in the last few decades has been exercised by Saudi Arabia (Ross, 2013).

Throughout the twentieth century, policy-makers in the United States have attributed a special status to petroleum since it was imperative for US security and power with its value being grounded in terms of its overall social importance rather than its market price enhancing the importance of cheap petroleum for US economic strength and therefore the enhancement of US hegemony (Bohi and Toman, 1993:1093). At the outset of the Second World War, the United States was a net exporter of petroleum and was the dominant actor in the petroleum industry due to its proven reserves and production capabilities which at the time surpassed that of Saudi Arabia (Yang, 1977:9). As with most other commodities, at the federal level the US government controlled the price of petroleum during the Second World War (Hamilton, 1985:101). By setting the price at $1.25 per barrel, demand for petroleum would increase by a two-fold during this period indicating altered patterns of increased energy consumption and a gradual shift away from coal[57] at the federal level (Hamilton, 1985:101). Because of the automobile industry's sole dependence on petroleum, petroleum surpassed coal's share of total energy use which occurred by roughly 1950 when petroleum was responsible for 38% of US energy consumption while coal consumption was 35% of total primary energy[58] (O'Connor and Cleveland, 2014:7; Ratner and Glover, 2014). This upsurge in the consumption of petroleum had some unintended consequences. While the United States had been the world's leading petroleum producer, the accelerated production of domestic reserves was quickly diminishing these and increasing the United States' reliance on imports (Klare, 2004(a):12). As the Second World War was coming to an end, the increased imports of petroleum became an issue of national security and thus had to be protected and accessed through the use of military power under the presidency of Franklin D. Roosevelt (Klare, 2004(a):12; Singer, 2008:1).

[57] Increased consumption of petroleum instead of coal was driven by (i) the reconstruction of war-torn Europe which was principally based on petroleum, and (ii) the shorter working hours that coal miners secured which led to a fifteen percent reduction in coal production (Hamilton, 1985: 101).

[58] Although coal made up approximately 45% of primary energy, the dependence of the automobile sector on petroleum meant that petroleum use in the United States remained roughly stable in the post-War period (Ratner and Glover, 2014). Although the percentage of coal and petroleum of the total primary energy mix was nearly the same, by the 1960s, the percentage of coal in the energy mix declined to 20% in contrast to the 35% of the energy mix that it represented in 1950 (Ratner and Glover, 2014).

By 1950, the USA produced and consumed more than 60% of total world petroleum (Bohi, 1987:22). In order to encourage domestic production, the domestic petroleum industry was granted special tax treatment for many years, and simultaneously production restrictions were placed on the domestic industry so that the market price would remain at a certain level (Bohi and Toman, 1993:1093). Because of its large share of total petroleum production and consumption, global petroleum pricing practices were merely an extension of the US pricing structure wherein federal petroleum import controls and state market-demand portioning determined the price of US petroleum (Bohi, 1987:22). Because petroleum prices during this period were relatively stable, the price of all other energy commodities was stable, "and hence price was not a visible determinant of energy consumption and production decisions" (Bohi, 1987:22).

The USA's hegemonic position in the petroleum system, yet abundant domestic reserves that could be supplied at a cheap price by domestic petroleum companies had consequences for its energy policy. In the pre-1973 context when energy reserves were relatively abundant and cheap, the US federal government had a limited role in the design of energy policy[59] (Department of Energy, 1994:3). What role the federal government did have was mostly limited to mitigating amongst the interests of a diverse set of private actors involved in the production, distribution and transmission of various fuels, and state and local authorities; while long-term planning was mainly devolved to the above-mentioned private and state as well as local actors (Department of Energy, 1994:3). Even though the federal government was aware of the importance of energy for its national security, it limited its intervention in the market with the exception of national emergencies such as the outbreak of both World Wars (Department of Energy, 1994:3). The 1970s' oil shocks would change this understanding of the appropriate role for government.

During this era, energy supply was the jurisdiction of the private sector which consisted of the "production, distribution, marketing, and pricing policies except where 'natural monopolies' could not guarantee fair prices…When free market conditions were absent, federal regulations were established to control energy prices" (Department of Energy, 1994:3). Instead, the federal government's role was confined to research and development in

[59] Although, energy policy in its present usage did not exist in the US prior to the 1970s, since the Industrial Revolution, there did exist efforts to regulate the production and distribution of various fuels and to provide support to the related industries and markets (Tomain, 1990:356).

areas designated as the public interest; and to promote energy programmes that could enhance the supply of economical and abundant energy (Department of Energy, 1994:3). Within the federal government, a variety of federal departments were involved in energy management culminating in an *ad hoc* approach that was developed as these departments were concerned with particular fuels and technologies and their relative characteristics, strengths and weaknesses rather than an all-encompassing approach to "energy" *per se* (Department of Energy, 1994:74).

Since the access to and supply of cheap petroleum was viewed as an integral aspect of US energy policy, the complex interplay of politics, economics and technology would have consequences for petroleum and energy markets and the interplay of petroleum with other sources of energy, especially renewable energy and coal. In 1952, the Truman administration was advised by the Paley Commission[60] to develop solar energy, as well as alternative sources of energy, as a means to limit the USA's increasing dependence on Middle Eastern petroleum imports (Strum, 1984:37). The Report strongly advised the United States to avoid becoming dependent on Middle Eastern petroleum and instead, it should increase research for solar energy and the development of synthetic fuels (Strum, 1984:38). The Commission urged that, "direct utilisation of solar energy is…perhaps the most important contribution technology can make to the materials shortage." (Quoted in Strum, 1984:38). The Commission likewise recommended the establishment of an energy agency (Strum, 1984:38). These recommendations were subsequently reinforced by the National Security Resources Board (NSRB) in 1952 which recommended research into the utilisation of unconventional energy sources such as solar energy, wind energy, tidal energy and atomic energy (Strum, 1984:38).

Before it was able to look into the feasibility of these recommendations, the Truman administration's run in office finished (Strum, 1984:38). Although Eisenhower's Council of Economic Advisers were supportive of these recommendations, the Eisenhower administration however, would not increase federal support for solar energy and synthetic fuels, with funding for solar research being restricted to $100 000 per annum during the 1950s in spite of calls to increase this funding to $1 million per annum (Strum, 1984:37 - 38).

[60] The Truman Administration created the Materials Policy Commission, which was named after William Paley, its chairman, as the Paley Commission, to investigate strategic material shortages as a result of the Korean War (1950 – 1953) (Strum, 1984:38).

The reason for this was that the Eisenhower administration wanted to restrict federal regulation of the economy and the development of energy (Strum, 1984:38 -39). The prevailing view was that the United States had sufficient supplies of energy and that consumers were to have the choice of whether they wanted to make use of alternative energy sources (Strum, 1984:39). The administration was averse to the development of synthetic fuels due to concerns that this may lead to an over-supply of fuels and consequently reduce the price of petroleum (Strum, 1984:39). Accordingly, the National Petroleum Council (NPC) pressurised President Eisenhower to stop the federal government's support for synthetic fuels which had consequences for solar energy research thus restricting the allocated funding to $100 000 per annum (Strum, 1984:39).

Although there was dissent[61], the prevailing viewpoint amongst decision-makers was that the United States had sufficient domestic reserves of fission energy and fossil fuels, and that additional supplies could be procured from the Middle East, likewise the US economy depended upon investment in fossil fuels, and that solar energy was not conducive to the prevailing investment framework since it would disrupt existing investments and was insufficiently profitable (Strum, 1984: 47, 48, 49). Nevertheless, the Department of Defense was interested in solar legislation and supported its research and development, especially for military operations, but they were opposed by the Department of Commerce, the Bureau of the Budget, the NSF and the Department of the Interior at the federal level (Strum, 1984:48).

Thus, decision-makers in the Eisenhower administration did not perceive solar energy to be a realistic component of the USA's energy policy, especially if this required federal government intervention (Strum, 1984:49). Rather, it was left to the market to determine the development of energy (Strum, 1984:49). Although the Eisenhower administration wanted to reduce federal expenditures, its decision to restrict federal support for synthetic fuels and solar energy helped to increase the USA's dependence on foreign petroleum imports (Strum, 1984:49).

There were similar implications for coal. Although coal and petroleum play different roles in the US economy, with coal being primarily used for electricity generation while the transportation sector is reliant on petroleum, by the mid-twentieth century, coal was replaced

[61] Senator Alan Bible urged the recommendation as a means to enhance the USA's energy supply and draw level with countries such as Japan, the USSR, France and Israel which were supportive of solar research and development (Strum, 1984:45).

by petroleum and natural gas as the USA's dominant primary energy fuels with coal representing 35% and petroleum representing 38% of consumption at the time, with the consumption of coal being reduced to 20% by 1960 while petroleum consumption increased (Ratner and Glover, 2014; Tarlock, 1985:349; Priest, 2012:239; Hakes, 2012:19). At the time, the coal industry asserted that the nation's replacement of coal with petroleum and natural gas was a temporary measure which would subside by 1960 (Tarlock, 1985:349). Unlike the petroleum industry, the coal industry did not request any form of subsidies that would restrict supply, but rather that the government should stop subsidising the petroleum and natural gas industries (Tarlock, 1985:349). In parallel to this effort to stop subsidies, the coal industry supported the establishment of a synthetic fuels programme, a request that was opposed by the petroleum industry (Tarlock, 1985:349). Moreover, the coal industry began requesting the establishment of a federal fuels policy that would oversee the interests of the coal industry during the Kennedy administration, but the petroleum industry opposed the establishment of such a policy (Tarlock, 1985:350). Throughout this period, the petroleum and natural gas industries played an active role in preventing the federal government in strongly subsidising the coal industry and limiting a debate regarding a non-petroleum based energy policy which would strongly feature coal (Tarlock, 1985:349). What enhanced the relationship between the federal government and the petroleum industry was that their interests were similar since petroleum was a strategic component of the USA's hegemonic position and enhanced US power due to its importance for the USA's economy and geopolitics (Tarlock, 1985:349 - 350).

Yet, the contradictions of such an approach could not be minimised for long. Up to the 1960s, US energy policy was based on the assumption that energy was ultimately a commodity that had to increase economic growth, and as a result environmental constraints related to energy production and use were relatively marginal issues (Melosi, 1987:167). Since the environmental costs related to extracting and processing were not factored in, the price of energy in the USA was artificially low (Melosi, 1987:167). During those times when unhindered exploitation and production did encroach on environmental conservation efforts, the main ideational division in policy centred around issues related to the role of government in the design of policy and whether the control and development of natural resources should be public or private (Melosi, 1987:167). However, by the 1960s, increased environmental awareness began to place pressure on the traditional assumptions upon which US energy policy was founded which had implications for the perception of the relationship regarding

the role of energy for economic growth and environmental regulation within the US federal system (Melosi, 1987:168).

3.4 Energy Policy in the Nixon, Ford and Carter Administrations: 1973 – 1979

Although the energy system in the pre-1973 era was characterised by relative stability, there were episodes where tensions in the Middle East raised alarm about the impact this would have on the price and supply of petroleum (Yergin, 1988:114). Iran's nationalisation of its petroleum industry in 1951, followed by the Suez Crisis in 1956, and again in 1967 following the Six Day War, all led to initial petroleum shortages; yet these were mitigated by the USA's sufficient unused production capacity to bolster supplies in the US and elsewhere thereby stabilising global petroleum prices (Yergin, 1988: 114; Ross, 2013). Throughout these upheavals, because of its abundant reserves of domestic energy sources ranging from coal, to petroleum to natural gas that its domestic industry could supply at an adequate price, the United States was sufficiently buffered from these shocks (Meyer, 1973:7).

This condition would change after the Six Day War of 1967 (Yergin, 1988:114). Three factors were responsible for the price stability in the petroleum market of the 1950s and the 1960s: the surplus capacity exhibited by the East Texas oil fields, "the Bretton Woods system of fixed exchange rates", and the Seven Sisters agency (Anglo-Iranian, Gulf Oil, Royal Dutch Shell, Standard Oil Company of California, Standard Oil Company of New Jersey, Standard Oil Company of New York and Texaco) - as the confluence of these factors ensured that continuous global production was maintained to fuel post-War rebuilding and ensured the necessary political stability through their monopolisation of the post-War petroleum industry "with tax breaks and the threat of military action to keep oil flowing to their citizens" in order to maintain petroleum supply to fuel the Bretton Woods System that underscored European and Japanese reconstruction thereby stabilising global prices and enhancing economic growth under US hegemony (Ross, 2013; Merrill, 2012:201, Pratt, 2012:145, 148-149, Priest, 2012:236, James, 2017:5). As Podobnik (2006:92) explains, "…the meteoric rise of the oil system was made possible by the convergence of specific geopolitical, commercial and social factors. Under the protective umbrella a new U.S. hegemonic order, major corporations were able to create a fundamentally new kind of energy regime. " With the Cold War escalating between the Soviet Union and the USA, their influence over the respective regions under their control was increasing as a result, and petroleum was a key aspect of this control (Podobnik, 2006:93). The multinational petroleum companies were essential in the access

and transportation of necessary petroleum supplies to enhance the economic growth of Western Europe and Japan in the post-War era and were able to exercise great influence over the supply of petroleum in their respective jurisdictions before the nationalisations of the 1970s (Podobnik, 2006:93; Pratt, 2012:148). US policy-makers were focused on building a Western-alliance *vis-à-vis* the Soviet Union which was dependent on "stable economic growth" in these regions (Podobnik, 2006:93). In turn, this economic growth was dependent on the supply of inexpensive petroleum (Podobnik, 2006:93). The inexpensive petroleum produced in Texas in the post-War era was instrumental in fuelling the USA's own economic growth (Merrill, 2012:201).

These three factors were made obsolete by the 1970s when Richard Nixon delinked the dollar from the gold standard, the Seven Sisters lost their dominance in the oil industry, the Organisation of Petroleum Exporting Countries' (OPEC) influence increased, the rise of independent petroleum companies who were offering more concessions[62] to OPEC such as greater participation in production enterprises and increased taxes, and no spare capacity remained in the East Texas oil fields (Ross, 2013; Odell, 1986:225; Yergin, 1979:84). Rising nationalism in the Middle East in the decade preceding the 1973 oil crisis stirred by the perceived dominance and influence exerted by American petroleum companies in the area, as well as geopolitical conflict, would pressure the nationalisation of the petroleum industry which further worsened these trends (Odell, 1986:32). Demand for petroleum substantially increased because of fast economic growth, and the inexpensiveness of petroleum, while there was also little investment in other energy sources from a geographically diverse background (Yergin, 1988: 114; Yergin, 1979:84). The result of this[63] was that by the 1970s

[62] In the pre- and post- Second World War era, the concessions which US petroleum companies accrued allowed these companies to maintain sovereignty over the territories within their jurisdiction (Odell, 1986:34). Thereby, these companies were able to explore without host government interference and should such exploration lead to the discovery of petroleum, these companies could unilaterally choose whether or not to exploit these resources and to what extent (Odell, 1986:34). The host governments agreed to a small royalty payment and a percentage of the profits which were determined by the companies (Odell, 1986:34).

[63] In the post-war years, a delicate balance existed between producing and consuming countries, with oil companies facilitating an intermediary role in this relationship (Levy, 1974:694). While the oil companies were the dominant players in the oil industry until the mid-twentieth century, this role would be minimized as producing countries wrested control of production in their territories and nationalised their oil industries (Levy, 1974:690, 694 – 695). Their position in the supply chain allowed them to use oil as a political weapon and provided them with geopolitical influence and immense profits (Ross, 2013). What facilitated the origins of the US energy crisis was that the development of domestic energy supplies was no longer sufficient to meet demand

there was no spare capacity in either the United States or anywhere else outside of the Middle East that could serve as a buffer against disruptions when US petroleum production peaked and "thus, when a new Middle East war sparked the Arab oil embargo in October 1973 and the first 'oil shock,' there were hardly any additional alternative supplies around the world on which to call." (Yergin, 1988: 114; Dorian *et al.*, 2006:1984).

By the 1970s, US hegemonic control of the petroleum system was not only challenged by Soviet interference and the continued need to maintain military and economic advantage over the USSR in the bipolar order, but also by rising nationalism in the Middle East and the rest of the developing world, as well as environmental problems which, in contrast to the previous challenges, were of a more intricate nature, touching on economic modes of production and consumption that were at the centre of US power in the international system. As a consequence of previous policies and trends, by the 1970s, political and market conditions were noticeably different than in the immediate post-War period. The dependence of industrialised countries on petroleum increased due to economic growth and the advent of the automobile, creating a lock-in effect. By the 1970s, petroleum dominated industrialised nations' energy mix and was supplying 30 percent of the industrial sector's power and about 25 percent of electricity generation, while the transportation sector was wholly dependent on petroleum (IEA (a), 2014:14). Under these conditions, energy security became a prominent political and policy issue after the oil embargo of 1973 (Yergin, 1988:110). In the 1970s, the main theme that US energy policy was concerned with was reducing the USA's dependence on imported petroleum (Yergin, 1979:84). What was controversial was how this would be achieved and which fuels should be part of the energy mix (Yergin, 1979:84).

Although the 1973 energy crisis sent shock waves through the system, it already became apparent prior to the 1973 crisis that the United States was vulnerable to disruptions (Department of Energy, 1994:5). In 1971, President Nixon warned that existing trends - if left unabated - would lead to an energy crisis (Department of Energy, 1994:5). On the fourth of June 1971, Richard Nixon announced the clean energy policy and indicated to Congress that accessing "sufficient energy in acceptable form" was becoming increasingly problematic and that it was necessary to promote clean energy supplies in order to enhance economic growth

(Meyer, 1973:7). As demand for energy was projected to increase over the 1970s and 1980s, combined with the inability of domestic production to meet this growth, the USA would become increasingly dependent on foreign supplies of petroleum (Meyer, 1973:7). The combination of these factors would create an adequate environment for the oil shocks of the 1970s.

and the country's socio-economic needs (Morton, 1973:66). This was a pivotal moment as it marked the first time that a US president addressed Congress on energy issues (Lapp, 2014). By this time, the inherent contradictions of the USA's energy mix were becoming all too apparent. As Lapp (2014) points out, "Coal is plentiful but sulphurous, natural gas is clean but scarce, oil is near its domestic pumping limit and uranium is a suspect arrival on the energy scene."

The Nixon administration outlined what the appropriate role for government under such circumstances should be which was maintaining the role of private industry but simultaneously nesting an area for government therein (Morton, 1973:67). The objective was to design a policy that could provide a dependable as well as adequate supply of energy that was capable of ensuring the nation's security as well as economic prosperity to maintain the USA's hegemonic position and enhance its material capabilities and security (Morton, 1973:65). Although Nixon requested the establishment of a department of natural resources and energy, Congress did not approve such a proposal[64] and paid it little heed within the various congressional committees throughout 1973 (Department of Energy, 1994:5).

Throughout 1973 Richard Nixon continuously warned about the United States energy situation but it was the Yom Kippur War in October 1973 that transformed the country's energy situation into a crisis by creating the most acute energy shortage that the United States experienced since the Second World War and marked a turning point in the post-war era (Department of Energy, 1994:5 – 6; Meyer, 1973:7; Nordhaus, 1980:341). On the 17th of October 1973, the Organisation of Petroleum Exporting Countries[65] exercised its market power and restricted its production and export of petroleum to the United States and its allies

[64] Although no Department of Natural Resources was established, in August 1971, price controls were put in place on the price of domestic petroleum resources, which were managed by federal regulations (Tatom, 1979:14). These regulations were put into place because of increasing shortages which themselves were caused by price controls (Tatom, 1979:14).

[65] The Organisation of Petroleum Exporting Countries (OPEC) was created to be an association that aims to protect its members' national interests with regards to the production and export of petroleum (Amuzegar 1974:221). Its creation by its original five member states was done in reaction "against arbitrary and unilateral decisions of the major oil companies" as well as the import quotas introduced by the Eisenhower administration in 1959 (Amuzegar 1974:221; Yang, 1977:4). As these states were dependent on income from the sale of petroleum to supplement their foreign exchange, the petroleum companies' apparent disregard for their national interest by continuously reducing the price of petroleum, would spur OPEC's political behaviour in the petroleum market (Amuzegar 1974:221).

who supported Israel during the Yom Kippur War (Greene, 1991: 127; Ross, 2013; Hamilton, 2009:220). After the oil embargo, the price of petroleum would quadruple between 1973 and 1974 (Brown *et al.*, 2006:6). This sudden price increase firmly established the USA's vulnerability to oil supply disruptions and the degree to which its economic and social activities, its hegemony and security in an anarchic system, depended on an unrestricted supply of petroleum.

The 1973 energy crisis was a watershed moment as it marked the end of the USA's energy affluence (Department of Energy, 1994:6). In the wake of the crisis, the energy situation was critical as it was not confined to regional shortages but instead was countrywide and impacted every economic sector (Department of Energy, 1994:6; Meyer, 1973:7; Kissinger, 2009:1). So critical was this situation that the Department of Energy described that, "Although presidential concern over petroleum supply and pricing extended back to the 1950s and earlier, Nixon's executive order for the first time institutionalised the Federal Government's response to post-World War II energy shortages." (Department of Energy, 1994:7).

In effect, the oil shocks of the 1970s destroyed the energy regime that emerged after the Second World War and which was based on the USA's diplomatic and military power in conjunction with the major petroleum companies that benefited from these (Ikenberry, 1986:105; Levy, 1974:690). An identified vulnerability was the political manipulations that were viewed as a major cause of the crisis and were related to the United States' dependence on imported petroleum (Ikenberry, 1986:107). By contrast establishing an adequate response was less simple. Katz (1984:34) highlights that, "The characteristics of the energy crisis, simultaneously acute and diffuse, immediate and long-range, technically complex and painfully obvious, deeply interpenetrated with all other societal processes - typified the emerging problems resulting from fundamental shifts in the international and domestic socioeconomic structures…"

3.4.1 Structural Influences

A state's response to challenges is influenced by their position within the distribution of power in an anarchic international system. The anarchic international system presents the incentives and constraints that states will respond to and states will have to carefully consider their means of self-help to deal with challenges while at the same time having to consider the positions of rivals and competitors alike as they compete for power and scarce resources. In

the aftermath of the energy crisis of 1973 the US economy[66] would soon after slide into recession; a key characteristic of every major energy crisis was the economic recession that followed an upsurge in the price of petroleum over the last forty years which would undermine US power and security relative to other states in the anarchic system (Hamilton, 1985:97; Singer, 2008:1). Since energy is an essential input into all economic activities, economic growth, and the associated domestic stability this depends on, is hampered with a decline in real Gross National Product (GNP), an increase in unemployment levels and inflation, thus creating a correlation between decreased economic performance and disruptions in petroleum supply, as well as increasing prices (Yergin, 1979:82; Hamilton, 1983:228 – 229; Bohi and Toman, 1993:1093). As such, the combination of the oil shock and its associated price hikes and economic stagnation would serve to emphasize the link between cheap petroleum and economic growth, security and stability that the USA depended on to maintain a relative advantage over the USSR, as well as rivals and allies and the implications thereof for its position in the distribution of power relative to these states (Singer, 2008:1; Yergin, 1979:81; Hamilton, 1983:228; Greene, 1997:65). Because the oil shocks of the 1970s coincided with the Cold War, it raised further fears that the Soviet Union could further destabilise the region and its petroleum production "with its considerable military forces poised across the Caucasus from Middle East oil fields" (Deutch, 2004:2).

The events of the 1970s, which included the oil shocks of 1973 and 1979 as well as environmental constraints, proved to be a turning point for US energy policy and were characterised by the difficulty of reconciling the design of the pre-1973 US energy policy to the new context. As a global hegemon, the USA had to be strategically concerned with the impact of the energy crisis because of the impact thereof on the strength of the US economy and its trade deficit, an important quality of the USA's hegemony (Aron, 1979:454; Sharbaugh, 1975: 88). Within the bipolar distribution of power, and the competition with the Soviet Union, the implications of the crisis for US hegemonic stability and potential decline had to be important considerations (Gilpin, 1987:42, Hung, n.d.). The crisis would emphasise the need for the development of a coherent energy policy which could enhance the USA's energy security (Department of Energy, 1994: 5). Within such a policy framework, the goals of improving the USA's energy security and reducing its dependence on foreign sources of petroleum became pivotal policy preoccupations of the Nixon and Ford administrations

[66] The upsurge in the global price of petroleum had a further negative effect of deteriorating the United States' balance of trade (Tatom, 1979:21).

(Sharbaugh, 1975: 88). Since the energy policies of US administrations in the 1970s were concerned with the policy goal of energy security, this required the federal government to have a more interventionist role in energy policy design (Yergin, 1988). Both the Nixon and Ford administrations emphasised the goal of improving the USA's energy self-sufficiency and limiting the USA's dependence on unstable regions (Department of Energy, 1994:6; Department of Energy, 1994:18). Yet, balancing between low energy prices for consumers with the enhancement of secure energy supplies proved difficult to attain, especially in the midst of an increasing need for environmental regulation (Department of Energy, 1994:20; Melosi, 1987:167).

The 1973 oil embargo was a defining point for developed nations' energy policies and the USA was no exception. Although the energy crisis was composed of many crises: economic, political, diplomatic, and geopolitical, all requiring a specific type of policy response, in the aftermath of the embargo, energy security became the most important goal of energy policy (Finon, 1994:3). Since US hegemony was based on cheap petroleum prices that enhanced the competitiveness of US industries and influenced its role, achieving energy security became a shorthand for achieving the economic growth and stability that US power and security were based on. That is, US hegemony rested on its military capabilities which in turn rested on its latent power that in essence was its economic strength. All energy policies had to enhance US economic power so that it could compete against other states both economically and militarily thereby enhancing its self-help in an anarchic international system.

At the start of the energy crisis, an important development in multilateral cooperation made possible by US hegemony was the establishment of the International Energy Agency (IEA). Before the embargo, the economic and diplomatic relationships between the region's petroleum producers and the Soviet Union and Communist China have exerted a strong influence over Middle Eastern states' strategic policies, especially within Syria and Iraq (Levy, 1974:692, 705). Western powers feared that the Soviet Union would use this opportunity to further undermine stability in petroleum producing countries and place further restraints on Western interests in the region thereby further destabilising the US and its allies (Levy, 1974:705). It is helpful to recall that the US objective in the post-World War Two era was to ensure the prosperity and stability of Western Europe and Japan, which was essential to the distribution of power *vis-à-vis* the Soviet Union (Nye, 1980:133). US policy-makers were concerned that in addition to the threat posed by the Soviet Union to Middle Eastern

stability, the challenge to the Organisation for Economic Cooperation and Development's (OECD) energy security would fracture the Western alliance (Nye, 1980:133).

While the USA's hegemonic position was influential in the global petroleum system of the pre-1973 era which relied on the USA's economic, military and diplomatic endeavours, the USA relied on its hegemonic position to bring order to the petroleum system in relation to both OPEC and the Soviet Union by band-wagoning with other industrialised countries. The United States, in cooperation with sixteen industrialised states, responded to the political and economic alterations spurred by the oil crisis of 1973 by establishing the International Energy Agency in November 1974 to serve as an independent intergovernmental agency within the Organisation for Economic Cooperation and Development (OECD) (IEA (a), 2014:13 - 14; Deutch, 2004:3; Keohane, 1978:933). The main purpose for the establishment of the IEA was to enhance global energy security for its members (IEA (a), 2014:3; Deutch, 2004:3). At its establishment, the focus was on the security of petroleum in particular as member states and their industries were so dependent on this resource (IEA (a), 2014:13). The IEA adopted a narrow and explicitly economic definition of energy security which was defined as "the uninterrupted availability of energy sources at an affordable price" (IEA (a), 2014:13). To enhance their collective security and reduce their vulnerability to any future embargoes and other interruptions to their energy access, these countries, under the leadership of US Secretary of State Henry Kissinger, worked within the structures of the IEA to coordinate emergency petroleum reserves and collectively reduce their demand for petroleum (Ikenberry, 1986:107). In reaction to these events, three strategies were promoted to enhance energy security: diversification from petroleum to other types of energy, greater emphasis on less energy-intensive technologies (demand-side management), and diversification away from Middle Eastern petroleum to other suppliers (Ikenberry, 1986:107). Ultimately, the main issue that had to be dealt with was the dependence displayed by Western economies on foreign sources of petroleum, particularly from the Middle East, thereby agreeing to broad principles for international cooperation which relied on a 90-day strategic petroleum stock requirement and response mechanism to minimise the effects of sudden supply disruptions and in case of a disruption to either increase supply, restrain demand, or release stocks or impose all three measures (Ikenberry, 1986:107; Kissinger, 2009, IEA(b), 2014:18).

Yet, the challenges presented by the energy crisis proved to be particularly challenging for coordination efforts through US hegemony, since the oil crisis revealed caveats amongst the industrialised countries within the alliance structure of the bipolar distribution of power

regarding solutions to the crisis and the raising of energy to a security issue thereby accentuating tension between these countries showcasing that states will pursue their own self-interest in spite of a common threat (Yergin, 1979:82). Although the creation of the IEA helped to diminish these conflicts somewhat, there still remained a measure of conflict which revolved around the development of reprocessing and breeder technologies and nuclear proliferation (Yergin, 1979:82). Other industrialised countries were also weary of the increasing petroleum imports in the United States (Yergin, 1979:82 – 83). It was suspected that the United States was integrating with Saudi Arabia to "pre-empt the country's production in a crisis" and also that the United States was increasing its petroleum imports in order to increase its own stockpile (Yergin, 1979:83). Thereby cooperation is hard to achieve in an anarchic system since self-interested states are concerned about cheating and that their competitors, even when that competitor is an ally, appears to attain relative gains.

In additional to these multilateral efforts, the energy crises of the decade also had important implications for the USA's military role that likewise was based on its hegemonic and historical role within the petroleum system. By 1979, President Carter hoped that the energy situation would have improved (Department of Energy, 1994:24). However, the Iranian Revolution which began in October 1978 once again caused petroleum shortages across the globe[67] (Podobnik, 2006:127; Department of Energy, 1994:25; Bohi, 1987:23). When the Shah of Iran was overthrown, a new regime came to power that was openly hostile to Western interests and perceived interference in the Middle East (Gately, 1986: 242). This helped to augment a hostile international environment which was further characterised by the rise of European countries and Japan in the international system. By this point, between 1973 and 1978, US petroleum consumption continued to grow by an approximate 11.8 percent and the USA became more vulnerable to OPEC supply disruptions (Lieber, 1980:154).[68] This situation was further destabilised by petroleum exporters who used this situation to increase prices which was potentially going to once again induce an economic recession in the USA with implications for US security and hegemony (Department of Energy, 1994: 24, 26). While, energy security entered into public conscience in 1973, the Iranian Revolution of 1979

[67] This upsurge in the price of petroleum occurred in spite of continued refinery throughput since the decline of Iranian throughput was counteracted by increased production from Saudi Arabia in the remaining months of 1978 (Bohi, 1987:22).

[68] By contrast, petroleum consumption declined in Western Europe and the OECD by 2.3 percent over the same period (Lieber, 1980: 154).

deteriorated this situation[69] (Yergin, 1988:110). Industrialised countries reacted to this event by following the same protocol that they initially followed in 1974 (Ikenberry, 1986:107). These events led the Carter administration to once again reiterate the importance of energy security in the wake of the new energy crisis (Department of Energy, 1994:27).

While a number of economic and technical strategies were employed to handle the energy crisis of the 1970s, military intervention and force were complementary strategies employed by succeeding administrations to maintain access to petroleum and energy resources. Due to its hegemonic position in the international system, the USA relied on the use of its military power to maintain access to and supply of Middle Eastern petroleum much like in previous decades, a role that was complementary to its position in the international system and driven by the threat posed by the Soviet Union within an anarchic international system. In January 1980, President Jimmy Carter announced in his State of the Union Address that "an attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States, and such an assault will be repelled by any means necessary, including military force" (Herman, 2014; Bacevich, 2010; Abrams, 2012). Such strategies had to be incorporated as part of its competitive strategy and foreign policy in relation to its rivalry with the Soviet Union in the bipolar order as a global hegemon that had to enhance its security after the effects of the oil shocks.

The Carter Doctrine was a pivotal moment in US security policy and was to have a long-lasting impact on the USA's involvement in the Middle East (Bacevich, 2010). Within its historical context, the Carter Doctrine must be viewed as a continuation of the Truman Doctrine which articulated the USA's role at the onset of the Cold War (Bacevich, 2010). In this context specifically, the Carter administration used this as a pre-emptive move to warn against Soviet involvement in Middle Eastern energy production (Bacevich, 2010). This also sustained the identification of the Middle East as a key national security interest which

[69] Other important changes that occurred relating to the structure of the petroleum market was the emergent use of futures and spot markets for petroleum products becoming prominent in the wake of the 1979 price shock (Bohi, 1987:25). The competition that emerged due to the use of spot markets has enabled the decoupling of petroleum companies' integrated operations while also breaking down the traditional relationships between petroleum importers and exporters (Bohi, 1987:25). In total, "The spot market provides an alternative supply source during supply disruptions, while the futures market provides an alternative insurance source for more risk-averse individuals. Similarly, the futures market provides speculators with the opportunity to gamble on future price changes without making transactions in physical barrels of oil." (Bohi, 1987:25).

required hard power and the application of military force (Bacevich, 2010). In 1996, the Clinton administration further solidified the idea that the USA will use force if necessary to maintain access to the Middle East's petroleum for the global market in his *National Security Strategy* (Singer, 2008:2).

As the USA was beginning to experience relative structural decline in the international system, this despite having the world's largest economy, at the start of the 1970s, the distribution of power in the international system would influence the USA in two important ways as its hegemonic position became more vulnerable *vis-à-vis* its rivals and allies, while at the same time US hegemony was central to its occupying a leadership role and pursuing certain objectives internationally. Since US hegemony rested on its economic strength and military power, the impact of the energy crisis on its economy had a deleterious influence on one of the key sources of US power *vis-à-vis* rivals and allies alike, US economic strength which rested on cheap petroleum. This situation was made more acute as implementing a coherent energy policy in response to the crisis was a complex task due to the multi-dimensional nature of the problem.

The USA was forced not only to deal with the implications of the crisis for the USA's economy, but likewise develop a policy based on multilateral cooperation and military intervention to deal with the crisis as its hegemonic position required it to maintain stability within the alliance structure in its rivalry with the Soviet Union within a bipolar distribution of power. This multi-pronged approach to deal with the crisis was driven by the USA's hegemonic position and its need to secure order in the international system while likewise protecting its hegemonic position in the aftermath of the crisis through the protection of its economic and military interests. Energy security became a pivotal goal of US energy policy, a goal made more acute due to the vulnerability US hegemony experienced in the hierarchic distribution of power, especially as its allies' economic strength was increasing. As a result, both economic and military considerations had to be prioritised which were facilitated by US hegemony. Since US competitiveness in the international distribution of power depended on inexpensive petroleum, efforts had to be secured to mitigate this situation through diplomatic and military means, a situation compounded by the USA's rivalry with the USSR in the bipolar international system to secure a relative advantage. Within this economic and political configuration within a bipolar distribution of power, the Middle East continued to be identified as a matter of national security, all the while US petroleum consumption increased, thereby increasing its vulnerability. While the USA relied on its position as a global hegemon

in the distribution of power to advance cooperation during this period of crisis, cooperation had been difficult to secure since its allies, as self-interested states, were worried about cheating and relative gains, showcasing that states will be worried about their own self-interest despite the commonality of the risk. Yet, although policy-makers wished to wean US dependency off Middle Eastern petroleum, this proved to be a difficult goal to achieve due to the intertwinement between US economic strength and influence over the global petroleum system which were based on US hegemony in the international system. Energy security thus became the principal goal of energy policy, since US hegemony was based on cheap petroleum prices which enhanced its competitiveness in relation to other states; therefore the negative economic consequences of the oil crisis indicated the vulnerability of the US economy to supply shocks and the USA's dependence on foreign petroleum.

3.4.2 Domestic Influences

Because of the extreme risks the crisis posed to US security, unlike earlier eras, the US government had to assume a more interventionist role in energy policy design. At the time, US energy policy focused on mitigating the consequences of these energy price increases on production and prices (Tatom, 1979:21). Because of the energy security vulnerability and belief that the world was running out of petroleum, the Nixon administration pushed through a number of bipartisan and extraordinary reforms at the federal level to meet the challenge of the USA's energy insecurity (Ross, 2013). The Nixon administration's main energy policy goal centred around increasing the production of domestic supplies which were to be based on conventional techniques mainly through price increases as well as nuclear energy (Yergin, 1979:86).

In response to the energy crisis, the beleaguered president launched *Project Independence* which aimed to transform the USA's energy policy and guarantee its energy security by having the nation achieve national energy self-sufficiency by 1980[70] (Department of Energy, 1994:6; Yergin, 2011; Bremmer and Hawes, 2004:104; Yergin, 1979:86). While concern over petroleum imports extended to the 1950s, introducing the goal of energy independence, even though it was unrealistic, marked a particular set of ideas about the nature of the crisis and its solution. Although it cannot be separated from political rhetoric to convince

[70] One of the most prominent omissions in the energy independence debate is that petroleum prices are determined in a global petroleum market; even if a nation should achieve so-called energy independence, the price of petroleum will still be affected by the global price (Nivola, 2002:25).

consumers of the government's uncompromising approach to the energy crisis, it is also indicative of the new teleological shift of the USA's energy policy. While this goal never materialised, the idea of achieving independence from perceived foreign interference would become a highly emotive rallying call of every presidential run-up (Nivola, 2002:24; Terzic, 2012:2).

The Ford administration maintained these policy goals in its energy policy which promoted domestic supply-side strategies that would predominantly be based on fossil fuels and nuclear energy (Yergin, 1979:86). When the Ford administration came to power shortly after the Watergate Scandal, it made a declaration that such an energy crisis was not to re-occur and emphasised the need to pursue *Project Independence* (Department of Energy, 1994:18). With this aim in mind, the Ford administration continued with the federal role towards energy policy established under the Nixon administration (Department of Energy, 1994:18).

In response to the crisis, there emerged two main pieces of legislation from these administrations which were the *Energy Policy and Legislation Act of 1975* and the *Energy Conservation and Production Act of 1976* after their Congressional approval at the federal level (Yergin, 1979:86; Department of Energy, 1994:19). However, in spite of these calls for energy independence, the USA's petroleum imports continued to increase (Department of Energy, 1994:19). The difficulties involved in managing this situation were comprehended by the Ford administration,

> "On January 7, 1977, Ford presented his last energy message to Congress. Cautioning against the dangers of a greatly expanded federal role in energy, he also warned the Nation of the high cost of delay in solving the energy problem. Ford emphasized the complexity of the issue and the difficult and extensive choices that had to be made. Besides underlining the interdependence among the United States and other consuming nations, he outlined the conflicting objectives that had to be balanced to achieve long-term equilibrium between energy supply and demand. The most difficult problems were reconciling politically popular low consumer prices with adequate and secure energy supplies and balancing environmental objectives with energy production and use." (Department of Energy, 1994:20).

Yet, in spite of the urgency and the necessity of designing a comprehensive energy policy to enhance US security and power, for a variety of political and technological reasons, the Nixon and Ford administrations' policy goals never materialised (Yergin, 1979:86). Environmental concerns restricted coal and nuclear production and use; the decontrol of energy prices at the time was impractical, while sufficient quantities of domestic petroleum and natural gas could not be produced (Yergin, 1979:86). Moreover, a moratorium had been placed on nuclear energy use further limiting these policies' options and results (Yergin, 1979:86). While conservation had been a policy goal of both administrations' energy policies, it was not really a priority, while solar energy did not even feature (Yergin, 1979:86). Thus, the anarchic structure of the international system, although it provides necessary and urgent incentives, is at most a permissive cause (Waltz, 2001:232 – 233), at the unit-level will be those factors that determine the practicality of policies, the contradictory consequences of their implementation, and the complicated task of meeting conflicting policy objectives.

What further complicated this response was that the 1970s were a critical period since this was the era when environmental concerns and the energy crisis merged (Melosi, 1987:167). The debate centred around whether the goals related to environmental protection and economic growth were reconcilable impacting the perception[71] amongst policy-makers of the compatibility of the two goals within the design of US energy policy (Melosi, 1987:167). Although environmental awareness had been increasing since the 1960s, most environmental problems were still mostly local and regional in nature (Melosi, 1987:170). The main concern, which also extended to the global level, related to natural resource exhaustion, a situation made acute by publications such as Meadows' *Limits to Growth* in 1972 and the 1973 publication of *Small is Beautiful* by E.F. Schumacher which painted doomsday scenarios related to dwindling supplies of natural resources and the need to reconsider the structure of economic systems. Nonetheless, in the 1970s, there were two major perceptions that began to emerge amongst policy-makers which prevailed and which influenced the USA's energy policy: (i) there was an inherent contradiction between the goals related to energy production and environmental regulation and (ii) energy production and

[71] Although the thesis is aware of the complex influence of ideology on policy-makers within the Nixon, Ford and Carter administrations during the 1970s, the influence of ideology during this era was somewhat less prominent (Uslaner, 1989:56), and there will be an overview of the role of ideology from chapter four onwards as it is from this point onwards that it has greater relevance for the policy areas under analysis. Nevertheless, for a fascinating discussion of the role of ideology in the 1970s, see Uslaner, 1989.

environmental regulation goals were complementary (Melosi, 1987:174). Policy-makers in the federal government increasingly had to take into consideration environmental concerns related to energy production and use in the 1970s and find a policy compromise (Melosi, 1987:176).

In contrast to the Nixon and Ford administrations, the energy policy introduced by the Carter administration was based on a different approach in the aftermath of the energy crisis and thereby contained new policy goals. In spite of the Nixon and Ford administrations' policy efforts, between 1975 and 1977, the USA's petroleum imports continued to increase, even though petroleum prices had decreased and supplies became stable (Department of Energy, 1994:19). While petroleum imports increased from 35.4% in 1974 to 35.8% of total petroleum supply in 1975, by 1976, imported petroleum accounted for 40.6%, and in 1977, 46.5% of total petroleum supply (Department of Energy, 1994:19). During the same period, the domestic production of petroleum declined (Department of Energy, 1994:19). In 1977, a natural gas shortage also occurred which further constrained energy supply (Department of Energy, 1994:20 - 21).

Although it was not wholly original, the Carter administration's energy policy included new elements in contrast to the policies advanced by the two previous administrations (Yergin, 1979:86 - 87). The National Energy Plan that was developed contained goals related to a new set of priorities, and opposed the "high-production strategies" of past energy policies, and was overwhelmingly impacted by the emergence of environmental concerns (Yergin, 1979:87). In the midst of the concerns about the USA's petroleum dependence, Carter's energy policy placed as a first priority the conservation of energy as the most affordable method to meet the nation's energy needs and to reduce petroleum imports (Yergin, 1979:87). Secondly, the plan emphasised increased domestic coal production as a means to reduce the United States' dependence on foreign petroleum (Yergin, 1979:87). Renewable energy, especially solar energy, was the third component of this plan (Yergin, 1979:87). Fourthly, the plan emphasised increasing the price of energy so that its price would reflect its true cost (Yergin, 1979:87).

In relation to the two previous administrations' energy policies, the Carter administration's energy policy maintained the overall proposals that these energy policies promoted. What was different was that its energy policy was characterised by a different focus wherein conservation reached the top of the policy agenda while minimising the role of domestic

natural gas and petroleum production and strongly argued that it was necessary to transition away from both domestic and foreign petroleum and natural gas (Yergin, 1979:87 - 88). The administration set a precedent by describing solar energy as a feasible, short-term source of energy (Yergin, 1979:88). After the Ford administration, the Carter administration's energy policy emphasized conservation, the innovation of alternative energy technologies and the reduction of energy consumption (Department of Energy, 1994:21). Unlike the Nixon administration, the Carter administration did not believe that the United States could realistically achieve energy independence; it did however hope that by 1985 the USA could reduce imports and demand, increase alternative energy technologies as well as coal production (Department of Energy, 1994:21).

The Carter administration's[72] position towards federal energy policy was defined by its formulation of a more comprehensive policy instead of merely overseeing fuel management which had characterised previous administrations (Department of Energy, 1994:22). The Carter administration emphasised that energy was a particularly difficult challenge, second only perhaps to the prevention of war, and underscored the peculiar challenge that energy presented to the executive and Congress to govern at the federal level (Department of Energy, 1994:21). Such measures were striking as it was only during times of war that the federal government undertook such a managerial role that was now been proposed by the Carter administration (Department of Energy, 1994:21).

In spite of its stated objectives, for a number of reasons, Carter's policy was unable to meet its goals and improve the era's challenges. For instance, the conservation measures were similar to the ones proposed by the Ford administration and proposals to implement provisions for conservation and solar energy when compared to the emphasis placed on these in his speeches, were quite minimal (Yergin, 1979:88). Support for nuclear energy also remained present, in spite of the Carter administration's statements to the contrary (Yergin, 1979:88). The environmental movement that emerged in this decade placed constraints on uninhibited energy production and raised environmental conservation to the top of the policy agenda very quickly, thereby restricting certain policy options such as the wide-spread use of coal (Tarlock, 1985: 353, 360).

[72] The Department of Energy was created under the Carter administration after Congressional approval (Department of Energy, 1994:22).

Moreover, at the federal level, the Senate did not support Carter's energy Bill, having it stalled in 1977 (Yergin, 1979:88 - 89). Since the Carter administration designed the energy policy in the absence of Congressional input, gaining support for it in the legislative branch proved difficult (Yergin, 1979:89). Opposition to Carter's energy policy also emerged from a number of domestic groups as well. Producers criticised the plan for not encouraging production while being overburdened with price controls, few federal incentives and environmental regulations (Yergin, 1979:89). The interests of consumers who were defined by "Congressional representatives from the industrial Midwest and Northeast" alongside consumer lobbying groups criticised the minimisation of price controls and that the price and tax proposals would establish an inequitable redistribution of income (Yergin, 1979:89 - 90). Although the Carter administration was later able to enact an energy policy, it contained a number of alterations due to proposals made in Congress[73] emphasising the constraints imposed by Congress in developing a coherent energy policy within the US federal system (Department of Energy, 1994:24). Nonetheless, the *National Energy Act* was a watershed moment since it voiced the end of the era of cheap and abundant energy and established conservation as an "indispensable ingredient in national energy policy" (Department of Energy, 1994:24).

Regarding the policy's outcomes, Yergin (1979:90) observes that, "With opinions so bitterly divided, and the perceptions of the distribution of benefits so sharp, it is not surprising that the efforts to advance towards a meaningful energy programme in the United States have been stalemated." Thereby, after some alterations, Congress passed the policy on the fifteenth of October 1978 (Yergin, 1979:90). However, the policy that was passed would have little effect on curbing the USA's increasing petroleum imports (Yergin, 1979:90). While the Carter administration attempted to institutionalise reform, there was limited consensus surrounding the problems or solutions and Congressional opposition have limited the necessary reforms (Yergin, 1979:91). Thus, "The real centrepiece of American energy policy continues to be stalemate…" (Yergin, 1979:91) within the US federal system, and the division therein as to how to adequately deal with complex problems, limiting the executive in its ability to develop a coherent energy policy.

[73] Congress rejected the crude oil equalisation tax (Department of Energy, 1994:24).

Before climate change became an issue of political significance, the widespread use of renewable energy was initially forecasted as a strategy of enhancing energy security[74] after the fall of the Shah of Iran in 1979 through the reduction of import dependence in developed nations (Sovacool, 2009; Podobnik, 1999:166). Hence, it appeared that from a security of supply perspective; renewable energy appeared to be a panacea to the challenges facing the world's energy market. The federal nature of the US government meant that states were encouraged by the federal government to experiment with different policy designs (Williamson and Sayer, 2012:22). Therewith, a number of states began to adopt policies that incentivised renewable energy development in the wake of the oil embargo of 1973 (Williamson and Sayer, 2012:19). This took on a number of different forms amongst individual states. For instance, Massachusetts became the first state in 1977 to use a sales tax policy in order to encourage the development of renewable energy (Williamson and Sayer, 2012:19). North Carolina, on the other hand, enacted business as well as personal income energy tax credits in 1977 (Williamson and Sayer, 2012:19). "…Oregon declared a state policy to encourage development of renewable sources…Oregon provided personal income tax credits to offset the costs of installing residential renewable energy systems." (Williamson and Sayer, 2012:19). Unfortunately, interest in renewable energy diminished in the 1980s and 1990s, and resumed in the 2000s (Williamson and Sayer, 2012:19).

In summary, although the Carter administration's policy was not original and drew on the work of previous administrations as well as Democratic counter-proposals, the key difference in its policy was that it managed to put together disparate elements into a policy framework and place greater emphasis on conservation in contrast to the idea of an abundant and excessive use of energy and a correspondingly limited role for government that characterised earlier eras (Department of Energy, 1994:21). While both the Nixon and Ford administrations primarily focused on the amplification of domestic energy supplies, the Carter administration was more supportive of energy efficiency measures (Department of Energy, 1994:21). What

[74] More recent scholarship highlights that security of supply considerations stemming from various geopolitical tensions necessitate the reduction of energy import dependence, and the mitigation of climate change which drive increased investment in renewable energy technologies (Podobnik, 1999: 163, Russett, 1979:200; Deese, 1979/80; Correljé and Van der Linde: 2006: 540; Huntington and Brown, 2004:715; Turton and Barreto, 2006:2232). Hence, policies dealing with energy security and the mitigation of climate change have converged in the quest for a sustainable energy system (Huntington and Brown, 2004:715; Turton and Barreto, 2006:2232).

is remarkable about this era is that although all three administrations faced similar structural constraints which were the bipolar international system, the start of US hegemonic decline, and the rise of European and Japanese rivals, yet they showcased different responses. During the 1970s, it was also difficult for all three administrations to form coherent energy policies as the executive interacted with Congress over complex, multidimensional issues (Uslaner, 1989:56; Miller, 1995). It may be understood that when confronted with the opportunities and constraints presented by the international system, these administrations had to design policies that reflected and enhanced the USA's hegemonic position while simultaneously been differentiated by their use of certain goals to meet the crisis within the limitations imposed by the US federal system.

3.5 The Reagan Administration's Energy Policy: 1981 – 1989

In contrast to the 1970s, market conditions changed in the 1980s (Yergin, 1988:110). While the 1970s were marked by high energy prices and international instability, the pendulum swung once again and by the 1980s, three important trends characterised this era which would alter geopolitical and market dynamics: the petroleum price collapse of 1986 caused mainly by Saudi Arabia's decision to increase its petroleum production; increased petroleum production from non-OPEC suppliers, and the emergence of a global, integrated petroleum market. By the 1980s, the likelihood of another politically induced energy shortage was significantly reduced because of the transition to a "globally integrated oil market" (Van der Graaf, 2012:234; Bohi, 1987:22).

While OPEC still contained the world's largest proven petroleum reserves; during this period its global petroleum production declined significantly which also weakened its geopolitical influence (Greene, 1997:65; Gately, 1986:242). OPEC's role was further undermined by OECD countries' concerted effort during this period to manoeuvre away from OPEC producers and diversify the world's petroleum supply with increased production flooding the market from the United Kingdom, Mexico, Norway and the Soviet Union (Ross, 2013; Gately, 1986:242). The collective result was that petroleum prices[75] fell by 70 percent between 1980 and 1986 (Ross, 2013). This helped to stall concerns over the security of petroleum as its production was no longer concentrated to a particular region (Yergin,

[75] Although petroleum prices declined by 70% between 1980 and 1986, the specific price collapse of 1986 was mainly caused by Saudi Arabia's decision to increase its production although there is some speculation surrounding the precise causes of the 1986 oil price drop (see Bohi, 1987).

1988:111). Rather, there was a surplus of production in comparison to the shortages experienced in the previous decade (Yergin, 1988:111). In response to the previous decade's oil shocks, the petroleum industry further altered with the creation of new market tools such as speculation and spot markets which dominated the petroleum industry in the 1980s (Ross, 2013). Industrialised nations' consumption also began to decline which reduced overall demand for Middle Eastern petroleum (Ross, 2013).

In 1986, petroleum prices collapsed, falling by 50 percent (Gately, 1986:238, 260; Department of Energy, 1994:46). The 1986 price collapse was precipitated by Saudi Arabia's[76] decision to restrict its production and was driven by its strategy to secure future revenues and credibility as a producer (Gately, 1986:252). Since Saudi Arabia had the world's largest proven petroleum reserves, it was concerned with the stability of the global petroleum market in contrast to other OPEC members whose reserves were less extensive (Gately, 1986:252 - 253). Gately describes the event as,

> "It seemed unlikely in 1985 that Saudi Arabia would break with the rest of OPEC and take the high profile, politically risky strategy of forcing a price collapse. The risks were not only political and economic. There were also external military risks: a hostile Iran might strike from across the Persian Gulf, widening its war with Iraq. Or, joining with Libya, Iran might foment destabilizing activity within Saudi Arabia." (Gately, 1986: 260 - 261).

However, the 1980s also presented a new set of challenges in addition to those experienced in the 1970s (Cavanagh *et al*., 1989:239). The 1980s were marked by the increased urgency for environmental protection in response to climate change and acid rain (Cavanagh *et al*., 1989:239). In particular, the combustion of fossil fuels was responsible for the climate change phenomenon which was a significant challenge as the US energy system was highly dependent on fossil fuels (Cavanagh *et al*., 1989:239). While traditional problems such as dependence on foreign petroleum, and trade deficits arising from this dependence remained,

[76] Traditionally, Saudi Arabia has occupied a decisive role in OPEC in terms of the pricing and availability of petroleum due to its disproportionately higher reserves (Levy, 1974:691). This allowed Saudi Arabia to act as a swing-state in the energy market whereby it decreased its petroleum supply if prices are too low or increases them if the price is too high (Houser and Mohan, 2011:3)

these new environmental threats were added to this existing repertoire (Cavanagh *et al*., 1989:240).

3.5.1 Structural Influences

States have to rely on self-help in the international system and must focus on ways to protect themselves against others to ensure their survival and Waltz reminds us that, "Whether firms survive and prosper depends on their own efforts." (1979:104 - 105). States have to continuously be concerned about their ability to compete economically in the anarchic system if they are to survive since a state's material capabilities depend on its economic strength (Waltz, 1993:59). When the Reagan administration came to power in 1981, it faced similar material constraints to the preceding Nixon, Ford and Carter administrations. At the start of the 1970s, the USA was beginning to experience relative structural decline in the international system due to the relative decline of the American economy even though its economy was still the largest in the world (Gilpin, 1987:42). By the 1980s, there were three major trends that further strained American economic power: its financing of the largest portion of the international alliance order under its control, its military competition and confrontation with the Soviet Union, as well as increased government expenditures towards domestic services which resulted in government expenditures increasing faster than the Gross National Product (GNP) (Gilpin, 1987:42). Within the bipolar order that characterised the distribution of power in the international system, the USA had to increasingly confront the ascent of Japan and European countries which posed as serious economic competitors within the international system (Mastanduno, 1991:75). As the distribution of power in the international system was altering, the Regan administration responded to these shifts and material constraints by developing an energy policy that could enhance US structural power through the re-invigoration of its economy. This would require that the federal role be limited and that energy policy be based on a pro-production strategy that was capable of delivering energy at reduced costs to consumers and industries. With changing market conditions by the mid-1980s, the Reagan administration could credit the stability of the USA's domestic energy sector to its energy policy. While the change in the distribution of power in the international system compelled the Reagan administration to seek solutions to the country's relative economic decline, the particular goals outlined in US energy policy would be influenced by the specific ideology that this administration had. Nevertheless, the distribution of power in the international system ultimately determined the direction of the Reagan administration's

energy policy to enable it to secure a relative advantage *vis-à-vis* its competitors while enhancing US economic power, and thereby security.

3.5.2 Domestic Influences

"The National Energy Policy Plan that I am sending to you…represents a break from the format and philosophy of the two National Energy Plans that preceded it. Our national energy plan should not be a rigid set of production and conservation goals dictated by Government. Our primary objective is simply for our citizens to have enough energy, and it is up to them to decide how much energy that is, and in what form and manner it will reach them." (Reagan, 1981). With the election of Ronald Reagan on the fourth of November 1980, this statement was to signify a departure with the energy policy framework that had been in place since the Carter administration (Department of Energy, 1994:33). Reagan's electoral victory would mark a water-shed moment in US politics as the Reagan administration introduced large-scale transformation in all spheres of policy-making in the United States (Axelrod and Wilson, 1991:842). The neoliberal Republican administration of Ronald Reagan was highly sceptical of any form of government intervention, and instead emphasised the decentralisation of all government authority (Elliot, 2013). The Reagan administration thus introduced a "New Federalism[77]" to minimise federal regulation and devolve governance functions from the federal government to the states (Axelrod and Wilson, 1991:841). This "New Federalism" was a reaction to the growth of the regulatory[78] role that the federal government undertook in the previous decade (Zimmerman, 1991:8).

Although the international system provides incentives, ideology will influence an administration's policy-makers' perception regarding the course of action states' will pursue in response to these (Waltz, 1979:107; Oskanian, 2016:628). The Reagan administration's approach toward energy policy was influenced by two major propositions: (i) its need to

[77] Reagan's federalism was defined as the devolution of political power to state and local governments (Zimmerman, 1991:7). In practice though, this federalism was never wholly institutionalised as Reagan "signed bills prohibiting state economic regulation of certain industries (Zimmerman, 1991:7). He did however minimise the federal government's oversight of state regulatory activity and also reduced many federal regulatory standards such as the Environmental Protection Agency's oversight of pollution levels (Zimmerman, 1991:10).

[78] Devolution was used as "a reaction to the growth of regulatory federalism during the 1970s. Candidate Reagan promised to devolve or delegate more authority to the states, and thus reduce the plethora of direct, crosscutting, crossover, and preemptive mandates imposed upon them by the federal government." (Durant, 1993:558).

bring the federal budget under control, and (ii) its ideological predisposition, in contrast to the administrations of the 1970s, which altered the federal government's role in energy policy (Department of Energy, 1994:33). For the Reagan administration, energy was part of the solution to the country's economic recovery while its ideological beliefs predisposed it to reduce the federal government's role so that the free market and the private sector were able to set the priorities (Reagan, 1981; Department of Energy, 1994:3). When the Reagan administration came to office in 1981 concerns over energy supply continued amidst the threat that increasing petroleum imports presented to the USA's energy security (Norman, 1981:1481; Department of Energy, 1994:31).

The Reagan administration's energy policy was based on the assumption that increased production was the only appropriate means to deal with rising demand (Norman, 1981:1481). An important aspect of this strategy was to eliminate government price controls and regulations which this administration assumed led to a decline in domestic energy production (Department of Energy, 1994:33). Instead, the federal government was supposed to promote "long-term, high-risk energy research and development" which for various reasons the private sector would be unable to support (Department of Energy, 1994:33). However, in those areas where it could, private capital was meant to assess the "commercial viability of energy technologies" (Department of Energy, 1994:33). The Reagan administration's ideological position also predisposed it to limit environmental regulation towards industry, however, it was more limited in this endeavour due to the steady increase in public support for the environment during the 1980s (Kelemen and Vogel, 2009:12; Norman, 1981:1481).

In essence, the position adopted by the Reagan administration was that the energy crisis was induced by the federal government due to the effects that past policy measures had on energy markets - policies that were fostered to protect certain energy industries from competition and government intervention in energy markets first originated in the 1920s with the demand pro-rationing system and the petroleum import quotas introduced in the 1950s on the grounds of national security (Department of Energy, 1994:34; Yang, 1977:2, 4). The prevailing mode of thought was that, "The more successful were those who sought relief from the rigours of competition through political means, the less robust became the adjustment capacity of the energy markets to unforeseen shocks." (Yang, 1977:4). As such, the Reagan administration's ideological beliefs influenced the administration to eliminate existing allocation and price controls on propane, petroleum and natural gas, allowing the prices of these fuels to be

determined by the free market[79] as the best means of enhancing US energy security and economic power within the anarchic international system (Department of Energy, 1994:34).

Thereby, in direct contrast to the previous administrations' measures and approach which began in 1973, the Reagan administration released *Securing America's Future: The National Energy Policy Plan* which focused on the economy's recovery and free market fundamentals towards energy decisions and the country's energy insecurity which originated in 1973 (Department of Energy, 1994:34). Under this new policy framework, the role of the federal government was to encourage the production of energy resources "and bring these energy resources into the marketplace" (Department of Energy, 1994:34). Within this framework, it was made clear that government will not occupy an interventionist and regulatory role that could be performed by the private sector (Department of Energy, 1994:34).

While the Reagan administration's policy wanted to focus on three main concerns: energy prices, environmental impacts and national security; its election was in essence a return to the limited role that federal government had in national energy management prior to the energy crisis of 1973 (Department of Energy, 1994:35). Moreover, by 1982, the United States' energy situation altered which the Reagan administration credited to the free market (Department of Energy, 1994:35). Therewith, by 1983, the Reagan administration developed an energy policy that continued with the free market fundamentals by discouraging price controls and energy allocation (Department of Energy, 1994:37). In 1983, the *National Energy Policy Plan* abandoned the goal of energy independence that had been promoted by previous administrations (Melosi, 1987:181). The Reagan administration justified increased production in light of the country's economic problems whereas previous administrations had focused on decreasing consumption to deal with the country's economic challenge (Melosi, 1987:181). Secretary of Energy, James Edwards was adamant that the solution to the nation's energy dilemma was to "produce, produce, produce." (Norman, 1981:4515).

However, since energy became integral for national security, energy security continued to be the central goal of the Reagan administration (Department of Energy, 1994:37). This was not unjustified since by the mid-1980s, concerns about energy security once again resurfaced due to continued warfare in the Middle East and rising imports which created concern over the United States' energy dependence within the Reagan administration (Department of Energy,

[79] The global collapse of petroleum prices later in the decade would disintegrate the effects of these measures (Ross, 2013).

1994:46). The United States' energy security thus appeared to be linked to the petroleum and gas industries for the foreseeable future (Department of Energy, 1994:47). Much of this was based on the historical development of US energy policy and the Reagan administration hearkened back to the ideas that surrounded US energy policy in the pre-1973 era. "The administration's faith in the private development of energy reaffirmed the historic role of government as promoter of economic growth and rejected its function as regulator and intervenor. Because the nation's economic interests were perceived to be linked to large, powerful energy industries, there was no attempt to tamper with the multinationals and large oil independents or to frustrate oil companies from diversifying into other energy sources. The administration's goal was to remove impediments to corporate action to stimulate economic growth." (Melosi, 1987:181).

Interestingly, while the Reagan administration's ideological position was applied to energy policy, this same stance was not extended to the area of nuclear energy; that is in spite of its free-market rhetoric, the Reagan administration strongly supported nuclear energy[80] and increased its funding (Axelrod and Wilson, 1991:841; Department of Energy, 1994:38; Joppke, 1992 – 1993:714; Norman, 1981:1481). Since the Reagan administration's energy policy was based on a pro-production strategy as a means of solving the nation's energy challenges, nuclear energy[81], like coal, petroleum, and natural gas, was to be integral to this strategy (Melosi, 1987:182). Within the federal structure of the US political system, Congress

[80] Although Reagan supported nuclear energy, civic groups allied themselves alongside state and local authorities to oppose nuclear facilities (Joppke, 1992 – 1993:710). Civic and state concerns centred around perceived waste disposal, costs and utility rate regulation as well as emergency planning (Joppke, 1992 – 1993:710). The Reagan administration pursued a major nuclear rearmament policy, with the Soviet Union's decision to invade Afghanistan heightening public concern over the possibility of the outbreak of nuclear war (Joppke, 1992 – 1993:713). Nonetheless, in the early 1980s, financial difficulties necessitated nuclear utilities to cancel the completion of a number of plants that were being built (Joppke, 1992 – 1983:713). The Three Mile Island accident, financial difficulties and diminished support from civilian and certain political actors led to a further halt of nuclear energy in the United States (Joppke, 1992 – 1993:713). Although the federal government was responsible for the regulation of nuclear energy under the Atomic Energy Act of 1954, in 1983 the Supreme Court passed a decision that gave states the right to reject the construction of nuclear plants in their territory as long as such a decision was grounded on economic concerns rather than nuclear hazards (Joppke, 1992 – 1993:715).

[81] Civic opposition to the use of nuclear energy in the United States began in the late 1960s (Joppke, 1992 – 1993:710). One of the key reasons for the restrictive use of nuclear energy had been the threat of proliferation (Yergin, 1979:87).

however did not support funding for nuclear energy after 1983 (Department of Energy, 1994:38). The Chernobyl nuclear accident of 1986 further reduced support for nuclear energy[82] (Department of Energy, 1994:43).

Due to America's abundant coal reserves, the Reagan administration strongly supported coal development, especially clean coal technology[83] as a means to increase its usage in light of environmental challenges (Department of Energy, 1994:42). The Reagan administration asserted that the USA's energy strength was represented by its vast coal reserves which totalled 80% of all known fossil fuel resources (Department of Energy, 1994:42). However, in the 1980s, energy generation and use based on coal and nuclear energy, the two main substitutes to petroleum, diminished in the United States amid rising concerns over their environmental consequences which "put increasing pressure on the whole energy supply system" while government support for renewable energy technologies was also halted (Yergin, 1988:110 - 111; Elliot, 2013).

Because of the high petroleum prices of the 1970s, a number of measures were enacted by Congress in the 1970s and early 1980s that aimed to increase energy supply from renewable energy technologies (Williams *et al.*, 1990:65). Although there was an enthusiastic uptake of renewable energy technology in the mid-1980s, this began to decline with decreasing private-sector investment, the plunge in petroleum prices, and limited support by the federal government (Williams *et al.*, 1990:65). Interestingly, it was during the 1980s that renewable energy technologies' feasibility was demonstrated (Williams *et al.*, 1990:65).

3.6 An Explanation of US Energy Policy Using Neoclassical Realism: International Structure and Domestic Constraints

Although this study indicates that anarchy and the distribution of power are important factors that influence states, unit-level variables are necessary intervening variables to the comprehension of state choices and actions (Lindemann, 2014:35). Within this framework, the international system remains constant and "imposes the same limitations on states" yet

[82] An additional crisis that was experienced shortly after the Iranian Revolution was the Three Mile Island Nuclear accident on the 28th of March 1979 which only strengthened civic opposition to nuclear energy (Department of Energy, 1994:26; Joppke, 1979: 710 – 711).

[83] In 1986, the *Clean Coal Technology Demonstration Programme* (CCTDP) was launched in an effort to combat acid rain (DOE, s.a.).

states respond differently to its influence (Katzenstein (a), 1977:597; Zakaria, 1992:180). It is argued that states will alter their behaviour towards systemic constraints when unit-level variables intervene (Lindemann, 2014:37). The contradictions of conflicting policy objectives interact with the value assigned to these in terms of their costs by decision-makers which results in trade-offs and inconsistencies.

At the start of the twentieth century, US economic growth and competitiveness developed because of cheap and abundant domestic energy reserves. The federal government's role was limited to providing an enabling environment and protection for domestic industries, especially against foreign competitors. During this epoch, US energy policy rested on the following set of assumptions: (i) private industry, markets and capital are the basis for innovation and wealth, therefore competition rather than government regulation is required; (ii) there is a correlation between energy production and economic productivity therefore, the more energy is produced and consumed, the stronger the economy will be (Landsberg, 1980:77); and (iii) the price of energy would decrease as refineries and utilities increased in size (Landsberg, 1980:77). These assumptions and context provided the rationale for US energy policy. And critically, within the distribution of power in the international system of the era, the low cost of energy gave the USA a competitive advantage in international markets against its rivals thereby facilitating the growth and maintenance of US hegemony.

In this regard, US energy policy has shown a degree of remarkable continuity. With the exception of the two World Wars and the energy crises of the 1970s, when government undertook a regulatory role in the management of energy resources, and attempted to find a comprehensive solution to the country's petroleum dependence, there remained a framework of ideas and ideology that has remained consistent. The contradictions of US energy policy cannot be understood apart from its hierarchic position in the international system as a global hegemon, a system which is also anarchic. This has operated on two levels. Firstly, the USA had to rely on its immense military capabilities and diplomatic endeavours to attain access to and supply Middle Eastern petroleum for itself and its allies. Secondly, in an anarchic competitive system dominated by a bipolar rivalry, the USA had to rely on cheap and abundant domestic energy to help it maintain its hegemonic position relative to its allies and rivals alike. The logic of the anarchic system compels states, even hegemons, to be continuously aware of their position relative to others, which forces them to undertake those actions that will enhance their material capabilities and security. Under such conditions, neither friend nor foe can be trusted, since today's ally can be tomorrow's competitor for

scarce resources and power. States thus continuously fear giving others a relative advantage over them. The USA is no exception.

However, the incentives provided by the international system have to be interpreted and processed through unit-level variables, which often produces unintended consequences for decision-makers. Each administration faced a particular context and had to design a policy that was suitable in the US political system. Access to and supply of inexpensive petroleum has been integral to US energy policy because of its necessity for the security of the US economy and promotion of the alliance structure vis-à-vis the Soviet Union within a bipolar international system. Nevertheless, in an anarchic system decision-makers had to determine a course of action that would maximise access to energy at a low price to ensure the competitiveness of US industries in relation to other countries and therefore enhance its hegemonic position.

Before 1973, decision-makers' main concerns revolved around the cost and supply of petroleum, especially for military operations and economic activities and competitiveness as these were imperative for the enhancement of the USA's hegemonic ascent and role in the international system. However, since the US had ample supplies of domestic resources, these remained minor concerns at the federal level. In an anarchic international system, states strive for security and power and compete for raw materials. Thereby, the USA's abundant domestic petroleum reserves during a period of conflict oversaw its hegemonic rise as the international order of the nineteenth century was disintegrating. Petroleum attained a security status because of its centrality for all military and economic operations in the USA which influenced the imperative related to the necessity of access to and supply of cheap petroleum.

It was during this period that the main contradictions faced by US policy-makers arose. Petroleum became a strategic component and allowed the US to wield influence over its allies and within the Middle East. In an anarchic system dominated by the rivalry between the USA and the USSR, US policy-makers had to restrict Soviet involvement in the Middle East and amongst its allies. However, they also had to protect domestic industries. To accomplish this, quotas, import restrictions as well as tax incentives were introduced. International petroleum companies received diplomatic and military assistance. This minimised support for other industries, coal and renewable energy in particular, while US production peaked in 1972 and economic growth depended on foreign petroleum, giving OPEC an opportunity to restrict the

supply of a resource that was central to US power in the distribution of power in the international system.

The events of the 1970s, which included the oil shocks of 1973 and 1979 as well as environmental constraints proved to be a turning point for US energy policy and were characterised by the difficulty of reconciling the design of the pre-1973 US energy policy to the new context. High energy prices and environmental constraints forced a reconsideration of decision-makers' understanding for the appropriate role for government as well as a reformulation of energy policy's goals, while maintaining the USA's hegemonic position. In an anarchic international system characterised by a bipolar order where the USA and USSR competed for influence over other states and a zero-sum game competition for access to scarce resources, decision-makers had two major concerns: restore US influence over the global petroleum system, and restore US competitiveness and energy security in the midst of high energy prices, increasing petroleum imports, and resultant trade deficit. The focus of US energy policy shifted under the Nixon and Ford administrations to a pro-production strategy in light of the embargo. However, such policy measures had to be designed within certain parameters. Firstly, the link between cheap petroleum and its importance for the economy became vividly illustrated. Such a link became paramount for US security in an anarchic system. Secondly, since security is the most important goal of states in an anarchic international system, Congress passed extraordinary and bipartisan reforms within the USA's federal system to protect US security. Thirdly, because of the nature of the problems faced by policy-makers, the contradictions of decisions arose because of the conflicting objectives of maintaining US hegemony thereby protecting petroleum supplies and allies, but at the same time meeting domestic challenges which included maintaining low prices for consumers, a policy goal which had to be balanced with the policy goal of security of supply while been cognisant of the emergence of environmental constraints.

Through the use of neoclassical realism it is possible to highlight the contradictions that arose as a consequence of US energy policy at the time. The most serious challenges facing policy-makers were increasing petroleum imports and energy security which were integral to US competitiveness in international markets and its strategic position amongst both allies and rivals. Such a preoccupation with competitiveness arises from states' concern with the policy goals that are perceived to enhance their security and power in an anarchic international system. However, the ability of decision-makers to achieve these goals in an anarchic system depends on domestic politics and economics (Mastanduno *et al.*, 1989:458).

To reflect on energy policy during this decade, both the Richard Nixon and Gerald Ford administrations based their energy policies on a conventional production strategy that is, increasing the domestic production of coal, petroleum, nuclear and natural gas (Yergin, 1979:81). The Jimmy Carter administration promoted a different strategy, one that was based on transitioning away from natural gas and petroleum, and instead relying more on energy conservation and solar energy (Yergin, 1979:81). While the Carter administration made the most ambitious effort to design and implement a coherent energy policy, the federal structure of the US political system checked these executive efforts due to a combination of Congressional opposition and interest group criticism which resulted in a watered-down policy. The structure of the domestic system is imperative for the pursuit of power in the international system as it essentially determines what is permissible even when policy-makers within an administration have a particular perception of which policy goals are needed to attain power and security (Mastanduno *et al.*, 1989:458). However, all three administrations when faced by a crisis were able to utilise their authority to invoke new measures in the USA's energy policy design to deal therewith (Jones and Strahan, 1985:156). As a result, much of what the executive can achieve ultimately "depends not only on the external interests and actions of states, but on their ability to manage, channel, or circumvent domestic political pressures as well." (Mastanduno *et al.*, 1989:458). During the 1970s, energy security[84] became the most important goal in the wake of the crisis. The above analysis indicates that policy-makers within these administrations' differing perceptions compelled them to pursue certain policy goals to deal with the energy crisis. Moreover, the differing perception related to the cost of the goals to deal with the energy crisis combined with federal level constrains thereon resulted in not only differing policies as described above but also the inability to coherently deal with the crisis.

The assumptions that US energy policy had been based on would be challenged by the events of the 1970s (Tomain, 2007). The resulting ambiguity surrounding the perception of the hierarchic ordering of policy goals and the resulting costs and benefits resulted in a splintering of the ideational framework surrounding US energy policy. Henceforth, two opposing viewpoints emerged regarding the goals that a comprehensive energy policy should

[84] The goal of energy security was complicated since the geopolitical calculations related to the Middle East and Europe had to be reconciled with alleviating the recession as well as enhancing economic growth and protecting the US economy from future shock.

consist of, one that believed that economic growth and environmental protection are compatible with one another and another that does not. While security and power may be the most important priorities for decision-makers at the structural-level, there is no formulae as to what this should entail nor as to how these should be achieved.

Predominantly, the link between increased energy production and consumption and economic growth has been the dominant theme of US energy policy. Energy is an essential input into all economic activities in the United States and its cheap and abundant provision have historically led to an increase in the country's economic productivity which altered its position in the international system (Congressional Budget Office, 2012:iv). Any perceived supply disruptions tend to increase the price of energy, and per consequence all other goods and services in the economy, thereby decreasing the USA's economic output (Congressional Budget Office, 2012:iv). However, the importance of each fuel to the economy determines the vulnerability that the US economy will display to this disruption (Congressional Budget Office, 2012:iv). Fossil fuels, and petroleum in particular, represent a particular area of vulnerability since they account for 80% of US energy consumption (Congressional Budget Office, 2012:iv). Disruptions in petroleum markets represent the biggest area of vulnerability for the US economy because of the dependence exhibited by the electricity and transportation sectors thereon (Congressional Budget Office, 2012:iv). In particular, an increase in the price of petroleum caused by disruptions have had the starkest impact on the economy and therefore the USA's hegemonic position and thereby security and power in the international system (Congressional Budget Office, 2012:iv).

These administrations' energy policies must be viewed in light of the USA's particular political system, as well these administrations' policy-makers' perception therein, and its hegemonic position and role in the international system. The energy crisis of 1973 yielded a mixed political response across a spectrum of actors (Katz, 1984:33). Due to various circumstances, Congress was marked by inaction towards the energy crisis and energy policy in general (Katz, 1984:33 – 34). Numerous special interest groups attempted to turn this crisis to their own advantage and applied pressure on policy-makers to meet their needs which created a mixed response (Katz, 1984:33). As a consequence, in the area of energy policy, the Congressional-executive relationship had a mixed track-record. Moreover, the incremental and quick response to the crises limited the ability of the federal government and Congressional committees to have a coherent response to the crisis (Katz, 1984:33). However, a crucial impediment to these efforts was the dependency of the transportation

sector on petroleum. While efforts have been made to enhance innovation, there was simply no alternative to petroleum in the automobile sector (Yergin, 1988:126; Greene, 2010:1616). Additionally, environmental concerns, which were predominantly local in nature, could no longer be ignored and placed constraints on the domestic production of various fossil fuels.

At the structural level, the consequences of economic and technological change mean that what makes a state strong in one era, cripples it in another – that is if the state is unable to utilise these changes to its advantage and adapt. The international system is highly competitive as nations continue to compete for ascendency therein. The anarchic nature of the system compels states to seek self-help therein by any means in order to ensure their security, as well as power. There is a link between national power and energy policy since a sound energy policy has implications for energy security, economic competitiveness and environmental protection. In his classic, *Politics among Nations*, Morgenthau (1968:106) asked, "What are the factors that make for the power of a nation *vis-à-vis* other nations?" Although he lists a number of elements, in a modern, industrialised state, an energy policy that ensures energy security and economic competitiveness no doubt remains embedded in the answer to this question. Energy's essential input into all social and economic processes makes its disruption a challenge for state power.

Although facing similar material constraints, a new approach to energy issues was developed in the 1980s under the Reagan administration with a return to the traditional limited role that the US government occupied in its energy policy that was to be based on deregulation (Behr and Berry, 1981). The Republican administration of Ronald Reagan came to power with a very specific set of ideas, and policymakers therein had a particular approach surrounding the role of government and economic functioning and based its energy policy on an ideology centred on a limited role for government in market intervention (Gershon, 2017; Weinberg, 1988:1321-1322). The Reagan administration's approach towards energy policy was based on its free market ideology which allowed for a more congruent position to emerge between the executive and Congress - with the exception of nuclear energy and to a degree environmental regulation - since the Reagan administration did not challenge the basic structure of the USA's energy and economic systems (Gershon, 2017). Concerned about US military competition with the Soviet Union, and economic competition with European allies and Japan, the Reagan administration had to determine a set of policy goals that could achieve energy security and economic competitiveness within the bipolar distribution of power (Gilpin, 1987; Milner and Snyder, 1988). The administration's ideological

predisposition would incline it to pursue a pro-production strategy heavily reliant on fossil fuels and limited government intervention, at the expense of renewable energy and the protection of the environment (Weinberg, 1988:1323). Again, decision-making surrounding ambiguous goals within a competitive international system where states strive for security and power, often leads to a selection of those goals that are most optimal for their attainment, often at the expense of other policy goals such as the protection of the environment. Since energy policy is important for the international competitiveness of US industries and thereby US hegemony, an energy policy had to be designed that could ensure adequately low prices and secure supply. Although environmental concerns began to receive increased public attention, the Reagan administration's free market ideology restrained its incorporation of these concerns into policy, especially if these were to challenge economic activities and growth and accrue unacceptable costs which were essential for the USA's hegemonic position and role (Weinberg, 1988:1332). Thus, there was little incentive from international pressures and energy system vulnerability by the mid-1980s for the US executive and Congress to undertake a more interventionist role, nor limit the USA's dependence on fossil fuels. During this era, the administration's ideological stance was paramount in influencing energy policy outcomes in response to the distribution of power in the international system.

Although it is not the central focus of the thesis, it may be useful to briefly discuss the reasons for Congressional inaction towards energy policy, in spite of its importance for the US economy and thereby hegemony. The United States Congress is characterised by the institutionalisation of highly intricate rules which restricts the design of a coherent energy policy (Uslaner, 1989:55). As a result, in Congress, a group can veto a proposal that is to their dislike, with coalitions often unable to strike a compromise especially when it comes to energy politics (Uslaner, 1989:74). Uslaner declares that, "…in the United States Congress, where complex rules often frustrate coherent policy formulation, strongly-held positions can prevail over obstructionist if they are determined enough." (Uslaner, 1989:55). All of the major primary energy sources, namely coal, natural gas, petroleum and uranium have drawbacks, and the choices and trade-offs between them tend to be highly technical and complex which results in technical factors not being determinate in energy policy decisions due to these complexities and trade-offs, thus policy decisions are often guided by ideology when considering their merits and drawbacks complicating Congressional deliberations on these issues and often leading to policy incoherence as the executive and Congress diverge

over the substance of energy policy (Orr, 1979:1026; Mitchell, 1978-979:605; Uslaner 1989:74).

One of the most important variables influencing the development of US energy policy has been ideology (Uslaner, 1989:59). While the separation of power embedded in the structure of American politics does play a role in influencing US energy policy particularly when one party controls the White House while the other controls Congress, it is ideological gridlock which has proven to be most decisive (Uslaner, 1989:56). "Under multidimensional preferences strongly held - as in energy – vote trading may be absolutely essential, but extremely difficult to obtain. The outcome is likely to be stalemate" (Uslaner, 1989:58). Scholars of energy politics in the United States Congress (that is voting on pertinent energy issues) have noted that while economic interests do play a role in determining outcomes (Mitchell, 1978 - 1979; Uslaner, 1989:59) more significant has been the role of ideology in determining outcomes in US Congressional politics in the 1970s and 1980s (Mitchell, 1978 - 1979; Uslaner, 1989:59).

From the analysis that has been developed, it is evident that all four administrations' energy policies, whether in time of crisis or stability, were influenced by the structure of the international system and the concern for the maintenance of US hegemony in relation not only to the USSR, but also rising competitors. Yet, each administration showcased a different response to managing the crisis based on what policy-makers' considered was required to alleviate the problem related to energy security and economic recession in the United States. Within the distribution of power in an anarchic international system, the USA would prioritise security and economic growth especially in relation to the military competition with the Soviet Union and the rivalry with European allies and Japan.

The federal structure of the US political system narrowed these options as Congress and the executive had to cooperate in the design of US energy policy. In response to the challenges faced by the USA, US energy policy reflected its hegemonic position. Since cheap petroleum facilitated US hegemony by enhancing its economic strength and competitiveness, the USA played an active diplomatic and military role in the global petroleum market both within its domestic energy policy and the establishment of the IEA. Within the distribution of power in the international system, the federal structure of the US political system, and differing administrations' policy-makers' perception of the costs related to policy goals, limited consensus on the substantive issues of energy policy and led to policy incoherence and

reflects the difficulties faced by the federal government to develop a coherent energy policy in response to the crisis (Department of Energy, 1994:5). The impact of the crisis would influence the government's role to become more regulatory, while congressional and executive approach to energy policy would require that energy policy be based on consensus rather than pragmatism. Significantly, this chapter lays the foundation to understand the historical development of US energy policy related to the importance of petroleum and low cost fossil fuels and its implications for subsequent administrations.

3.7 Conclusion

This chapter has provided a historical overview of the evolution of energy policy in the United States of America since the period of its industrialisation during which time, the USA's energy policy would centre around three economic assumptions: private industry, markets and capital are the basis for innovation and wealth, therefore competition rather than government regulation is required; (ii) there is a correlation between energy production and economic productivity therefore, the more energy is produced and consumed, the stronger the economy will be; and (iii) the price of energy would decrease as refineries and utilities increased in size. Although at the time, it lacked a coherent energy policy that could link various energy industries, the USA was still able to sustain strong economic growth at the start of the twentieth century. But the decision that was to have ripple effects throughout the rest of the twentieth century was the decision to shift the US navy from coal to petroleum during the First World War. Over the next three decades, petroleum would gain a disproportionally important influence within US energy policy as it became tied to US strategic interests in the Middle East and amongst its European and Japanese allies after the Second World War. Within this context, the USA, due to its hegemonic position, has occupied a central role in global energy supply and has concerned itself not only with its own energy security requirements but pivotally, also with that of its allies and has acted as a stabiliser in the global energy system since the 1940s. However, as the USA became increasingly dependent on foreign petroleum, decision-makers would become concerned about the implications thereof for US national security and introduced a quota system to protect US domestic interests and its national security, while the USA relied on its military and diplomatic power to protect the access to and supply of Middle Eastern petroleum. Ironically, US dependence on foreign petroleum would increase between the end of the Second World War, and the oil crisis of 1973, while its domestic production would decline and finally plateau in 1972. The US government's support for the petroleum industry and

focus on petroleum in relation to other energy resources, notably coal[85] and renewable energy, would only cause the crisis to deteriorate in the pre-1973 era. Before 1973, this emphasis on petroleum was based on the link between petroleum and national security in US national interests, while the government wished to restrict federal regulation of energy and the economy and rely on the private sector instead while at the same time as the petroleum and natural gas industries lobbied the federal government to limit subsidies to the coal industry and restricted dialogue of the possibility of a non-petroleum based energy policy which was highly inclusive of coal.

In October 1973, the Yom Kippur War was the turning point that would transform the USA's energy context into a crisis. The successive Nixon and Ford administrations, while recognising the complexity of the situation, would issue the declaration for the USA's Energy Independence from foreign petroleum in the next decade, an emotive rallying call that hearkens to the stark vulnerability that the USA's dependence on foreign petroleum illustrated. Both administrations' energy policies had a pro-production focus to restore US energy security. In addition, the creation of the IEA was an attempt to re-establish US hegemony in the energy sector *vis-à-vis* OPEC, and maintain the USA's role therein in relation to Soviet involvement. Yet, the energy crisis would reveal important fractures

[85] Coal and petroleum play different roles in the US economy wherein the major contribution of coal is for the generation of electricity while petroleum is used across sectors (Ratner and Glover, 2014:7-8; Tomain, 1990:365). In 1950, coal consumption was equivalent to "35% of total primary energy" which was reduced to approximately 20% by 1960 (Ratner and Glover, 2014:1, 4). Although petroleum is used across sectors; the transportation sector is almost entirely dependent on petroleum (Ratner and Glover, 2014:6, 7). While the US government subsidised both the coal and petroleum industries between the end of the Second World War and the energy crisis of 1973, by the mid-twentieth century, a strategic relationship existed between the petroleum industry and the US government as their interests converged (Tarlock, 1985:349-350; Tomain, 1990:360; Sovacool, 2017:156). Although coal is domestically produced, petroleum had geopolitical implications and would thereby occupy an important status in US foreign policy. Indeed, Priest (2012:236) asserts that, "The control of oil also helped elevate the United States as the supreme global power… In the postwar period, American-controlled oil underwrote European and Japanese reconstruction. Oil thus became a key component in the exercise of American hegemony over a relatively prosperous world order, after an era in which an unstable balance of power produced two world wars sandwiched around a global depression." Petroleum thus became a significant component of US foreign policy and geopolitical calculations during this era (Priest, 2012:236). Moreover, due to the close link between the petroleum industry and the US government during this era, the petroleum industry pressurised the US government to give the coal industry more limited subsidies relative to itself (Tarlock 1985:349).

between the USA and its allies towards the crisis and the difficulties involved in securing cooperation towards such an essential resource. Under the Carter administration, US energy policy would be redirected to focus on conservation as a means to meet the decade's challenges while environmental regulation, unlike previous policies, would strongly feature. While displaying different ideational frameworks towards the oil crises and its multi-faced consequences, all three administrations would face some degree of Congressional opposition and dawdling response towards the development of a solution to these crises. However, the Reagan administration discontinued with the policy response developed by the previous administrations and redesigned US energy policy to its pre-1973 framework. With the increasing environmental awareness that began in the 1960s and intensified in the 1970s, Congressional opposition would limit its ability to hamper environmental regulation and increased nuclear energy production. Yet, the development of US energy policy from the 1970s up to the Regan administration would illustrate the difficulties involved in the development of a coherent US energy policy and the entrenchment therein of the basic assumptions that developed in the first half of the century.

The combination of the oil embargoes and its associated price hikes and economic stagnation would serve to emphasize the link between cheap petroleum and economic growth and stability (Singer, 2008:1). However, the ambiguous nature of how to attain policy objectives and decide on the energy mix and the distribution of costs and benefits, as well as their relation to other policy goals makes the formulation of a coherent energy policy problematic and per consequence successive administrations' policy-makers' perception regarding policy goals were inhibited by both internal and external constraints. Since the 1960s, environmental concerns have made this more problematic and have led to a tension between economic growth and environmental protection. Even though the oil shocks of the 1970s had a negative macroeconomic impact on and weakened the USA structurally in relation to other states, the USA's hegemonic position would not allow it to relinquish a petroleum system that essentially developed under its control, especially with the threat stemming from the Soviet Union, and the ascent of European countries and Japan within the bipolar distribution of power. With the oil crises and environmental concerns of the 1970s, two divergent paradigms emerged in regards to the attainment of these economic assumptions, one that believed that environmental protection was compatible with economic growth and put forward a set of proposals to attain these, and the other which viewed environmental protection as essentially incompatible with economic growth. Within this context, climate change would emerge as a

further complicating factor that would add to the contradictions of US energy policy which will be further discussed and analysed in the following chapter. Yet, throughout the twentieth and into the twenty-first centuries, petroleum would occupy a strategic and central place in US energy policy. This historical chapter laid the foundation for understanding the development of US energy policy during most of the twentieth century and while perception plays a lesser analytical role in this chapter since environmental regulation only began to feature as a prominent policy-driver that had to be considered from the 1970s onwards, this becomes an important consideration for subsequent administrations as climate change and the UNFCCC became important considerations for the design of US energy policy.

Chapter 4

The George H.W. Bush Administration 1989 – 1993: The End of the Cold War and the Greening of Energy Policy

4.1 Introduction

The Bush administration (1989 – 1993) continued with the energy policy framework developed by the Reagan administration but was less ideologically committed to the free-market principles that characterised the former administration and was more supportive of environmental regulation, to an extent. Three important trends occurred during this period that would have implications for US energy policy: the end of the Cold War, the Iraqi invasion of Kuwait and the origins of the UNFCCC. Moreover, the international system changed from a bipolar to a unipolar[86] system. The Bush administration was the first to attempt to integrate energy and climate change policies. Energy is an essential contributor to the climate change phenomenon principally through the combustion of fossil fuels. Yet, fossil fuel-based energy supply is essential for economic activities and growth, a historical trend which has resulted in the global energy mix to continue to be dependent predominantly on fossil fuels. This has created a link between economic growth and prosperity and by extension state power, and the combustion of fossil fuels. Over time, the lock-in effect of modern energy systems complicates the transition away from these fossil fuels without incurring serious economic repercussions.

By 1988, climate change emerged on the policy agenda in the United States. It also turned out to be a divisive issue in US politics as it would place pressure on the traditional economic assumptions that its energy policy relied on. Due to the entrenchment of these assumptions, integrating the costs of mitigation into US energy policy would become extremely difficult. Nonetheless, the United Nations Framework Convention on Climate Change (UNFCCC) was established and ratified by the USA becoming an important policy driver.

[86] There are certain analysts who disagree with the notion that the international system changed to a unipolar order after the end of the bipolar order of the Cold War, rather arguing that the international system changed to a multipolar order instead (Gaiser and Kovacˇ, 2012:49 – 53). In the view of this thesis, the international system changed to a unipolar system after the end of the Cold War (see Brooks and Wohlforth, 2015/16).

Since the establishment of the UNFCCC in 1992, the United States has been described as an essential leader whose participation is indispensable to generate an outcome[87] that would decelerate environmental deterioration. Historically, it has contributed the largest percentage of total cumulative emissions. As a global hegemon it has also been integral for the design and success of the UNFCCC negotiations. From the outset, its role therein has been met with controversy. Since the Rio Earth Negotiations, the USA has adopted a position that contrasted with that of most developed as well as developing nations. This however, was not always the case. When environmental problems emerged at the fore of international attention in the 1960s and 1970s, US leadership was characterised as a creator and proponent of international environmental negotiations[88], by the 1990s this radically changed and for the next two decades it was criticised for being an obstacle as well as laggard towards collective action towards environmental issues (Ivanova and Esty, 2008:57).

In the midst of these constraints, analysts, politicians and the media lament the lack of a coherent federal energy policy in the USA. The continuous rise of US dependence on foreign petroleum, and its inability to integrate mitigation targets have been pointed out as deep-seated flaws of its energy policy design. In the midst of these difficulties, the division of power between Congress and the executive have resulted in a stunted approach to energy policy. This emphasis on the cost and competitiveness of energy and its mitigation in relation to other countries is anticipated since this was viewed to structurally weaken the USA in relation to other countries. Therefore, the USA's energy policy needs to be understood in light of its historical development and its objectives, while congressional politics remain characterised by stalemate. This would have consequences for the USA's position in the negotiations in the lead up to the UNFCCC. As a result, the US position would be characterised by the contestation of the principle of Common but Differentiated

[87] Leadership is a highly contested concept in the climate change negotiations. Often, it is invoked with a state's ambition to limit GHGs (Andresen and Agrawala, 2002:4). There does not exist a single type of leadership and there is no single means to exercise it (Andresen and Agrawala, 2002:41). There is further ambiguity surrounding who is recognised as a leader by other states and under what conditions (Parker *et al.*, 2014:2). Thus far, the USA, China, the EU and the G77 have been identified as leaders at the multilateral negotiations (Parker *et al.*, 2014:8). It is not clear what leadership can be used for. That is, leadership can just as easily be used for the purpose of obstructionism, as it can towards the abatement of GHGs.

[88] Some of these early efforts and leadership initiatives were instrumental in the creation of the United Nations Environment Programme (1972), Convention Concerning the Prevention of Marine Pollution by Dumping of Wastes and other Matter (Ocean Dumping Convention), and the Montreal Protocol (Ivanova and Esty, 2008:57).

Responsibilities (CBDR), and the use of legally-binding mitigation targets, while emphasising the use of nationally determined actions and its leadership in the negotiations. Such a two-level game further involves US domestic climate change politics which are complex and involve the coordination of a multitude of actors. In this chapter, a brief explanation of the main themes of the US position in the UNFCCC is provided as well as an overview of its political system. This chapter then provides an overview of the origins of anthropogenic climate change on the US political agenda. An overview of the development of US energy policy, followed by its position in the UNFCCC, and the interactions between these two policy areas is provided.

4.2 A Brief Outline of the Main Controversial Issues Covered in the UNFCCC and the US Position

The United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992 at the Rio Earth Conference with the objective of the "… stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner." (UNFCCC, 1992:4). Although this goal is broadly agreed to in principle, it has drawn much criticism and controversy. The USA, as one of the central actors within the UNFCCC, has criticised a number of issues concerning the objective of the UNFCCC, especially focusing on the principle of Common but Differentiated Responsibilities (CBDR), the architecture of the UNFCCC and US leadership therein. The issue of *Common but Differentiated Responsibilities* is one of the most controversial aspects of the UNFCCC negotiations. Most of this contention boils down to the issue of relative historical contribution towards aggregate emissions, rather than current emissions. Since 1992, the principle of CBDR was, and continues to be, intended to reveal the divergent economic, political, social, and historical contexts that characterise developed and developing nations (Kopela, 2014:71).

The USA nonetheless points out that the principle is no longer consistent with recent economic developments that have occurred in the last twenty-five years that render the principle outdated (Kopela, 2014:71). As developing countries' share of global emissions has grown and will exceed those of developed countries in the future, there is increasing pressure placed on them to accept mitigation obligations, something they oppose citing developed

countries' responsibility for climate change and their own need to meet economic and developmental needs (Kopela, 2014:71; Leaf *et al.*, 2003:304). Developing countries further point out that the phenomenon of climate change was caused by developed countries' historical consumption patterns and that global environmental agreements would hinder developing countries from being able to access the goods and services that enabled developed countries to amass their wealth and standards of living (Leaf *et al.*, 2003:304). While all states share in the responsibility for alleviating climate change, they are differentiated in their capabilities to mitigate it, and crucially in their responsibility regarding their contribution towards historical emissions (Kopela, 2014:88), a point that is continuously reinforced by developing countries but that the United States criticises because since climate change is a global problem and developing countries will be responsible for the greater share of future emissions, developing nations should not be exempt from accepting obligatory mitigation targets (Biermann, 2005:282). The principle nonetheless acknowledges developing countries' special circumstances in that their emissions need to increase to alleviate poverty levels and enhance socio-economic development (Kopela, 2014:89). The USA has contested the principle of CBDR and instead suggested that the principle of equal allocation of emissions rights per unit of Gross Domestic Product (GDP) should rather guide mitigation actions (Biermann, 2005:281).

For many years, there were two fundamental approaches to the architecture of the global climate change regime that have not been resolved. With the entry into force of the Kyoto Protocol in 2005, Parties faced the challenge of having to decide what to do once the Kyoto Protocol expired in 2012 (Bodansky, 2011:2). In terms of the abatement of *total* emissions, this has remained a problematic endeavour as only a quarter of those countries responsible for global emissions had quantified emission reduction targets under the Kyoto Protocol, while other states such as Canada, Japan and Russia indicated increased reluctance to continue with the framework established under the Kyoto Protocol as the negotiations progressed (Bodansky, 2011:2). In relation to this framework, other countries, notably China, India and the United States have favoured a bottom-up approach which relies on nationally-determined policies (Bodansky, 2011: 2 - 3). In designing the architecture of the regime, the climate change negotiations have faced a choice between two main alternatives over the last few years: (i) accept the legally-binding, quantitative approach presented by the Kyoto Protocol, or (ii) rely on a bottom-up approach that utilised nationally-defined measures (Bodansky, 2011:3). For years, the United States has supported the latter approach (Bodansky, 2011:3).

Irrespective of their position towards the UNFCCC, all US administrations have alluded to the importance of US leadership in the climate change regime. The USA has relied on its leadership position as a global hegemon to design the UNFCCC and the related Kyoto Protocol, but to also design a number of parallel bilateral and multilateral agreements in conjunction with other countries (Biermann, 2005:277). Whether multilateralism or unilateralism was adopted by different administrations, each administration sought to direct the UNFCCC negotiations on the USA's terms (Biermann, 2005:284). Yet, whether they could accept the terms of the UNFCCC agreement depended on a number of unique features found within the USA's political system.

4.3 An Introduction to the US Federal Government: The Relationship between the US President and Congress and its Implications for International Treaties

The US has a number of unique as well as intricate qualities characterising its legal, constitutional as well as political institutions that influence its domestic and international climate policies and the position that it has at international negotiations (Wirth, 2015:1). Over the years, domestic and international politics have become highly complex and further depend on the state of existing federal legislation towards a highly regulated issue such as the environment (Wirth, 2015:1 – 2). To understand the conditions under which the ratification of international treaties is undertaken by the US president, it is necessary to understand certain features of the American political system. To accomplish this, this section briefly describes the relationship between the US President and Congress in relation to international treaties before proceeding to expand on this interaction within the context of the study's area of investigation.

The United States of America is a federal political system. Its government is divided into three branches consisting of the executive, judicial and legislative branches creating a system of "checks and balances" (CAR, 2002:11 – 12; CAR, 2010:10). Unlike parliamentary systems, a separation of power distinguishes its tripartite system (CAR, 2002:12). Under its federal system state, local and federal governments share power towards energy and economic issues as well as natural resources amongst other things (CAR, 2010:10). As such, a number of commissions, advisory offices and departments work together to develop, implement and coordinate the nation's climate change policies (CAR, 2010:9).

Therefore, policy-making in the United States occurs at different levels (Fisher, 2013:770). Thus, multiple actors are involved at a number of levels whose interactions intersect in highly

complex and nuanced ways. This distribution of various domestic coalitions, as well as the preferences of domestic actors, indicate the pressure exerted on the executive to achieve often conflicting national objectives within the UN climate change negotiations (Downie, 2013:24). Within this environment, bureaucracies negotiate amongst one another to formulate a policy position and establish coalitions with the preferences displayed by various government agencies and bureaucratic coalitions changing over time (Downie, 2013:24 - 25).

The President's power is circumscribed in relation to Congress under Article II, Section 2, Clause 2 of the Constitution of the United States of America which articulates that "No State shall, without the Consent of Congress…enter into any Agreement or Compact with another State, or with a foreign Power" (The Constitution of the United States, 2007:8; Skodvin and Andresen, 2009; Depledge, 2005:2). According to this clause, in order to make treaties, the president is required to have the support of two-thirds of the US Senate in order to ratify and put international treaties into effect (Hovi *et al*., 2010:4; Depledge, 2005:2; Bang *et al*., 2012:756). The stipulations set out in the US Constitution influence its domestic as well as international climate policies (Skodvin and Andresen, 2009).

While the US Constitution separates foreign policy-making between the President as well as Congress, this separation is not decisive (Grimmett, 1999). Grimmett explains that, "What the Constitution does, and *all that it does*, is to confer on the President certain powers capable of affecting our foreign relations, and certain other powers of the same general kind on the Senate, and still other such powers on Congress; but which of these organs shall have the decisive and final voice in determining the course of the American nation is left for events to resolve." (Grimmett, 1999). The final foreign policy outcome is the result of the interplay between the President and Congress (Grimmett, 1999). Thereby, each tier has influence over the foreign policy making process although they have different roles therein (Grimmett, 1999).

Within this tug-of-war relationship between the executive and congressional branches of government, there are a number of ways in which Congress and the President have the authority to modify the US position and treaties *vis-à-vis* one another in international negotiations. The first and most obvious is that because of the restrictions of the Constitution, without Congressional support, the President will be unable to pass an international treaty that is binding on the United States (Skodvin and Andresen, 2009; Garcia, 2015).

The precise impact of international legal agreements on domestic US law once these are entered into law depend on the nature of the agreement, that is whether it is self-executing or not self-executing (Garcia, 2015:12). When an international treaty or executive agreement is characterised by the force of law without requiring subsequent congressional action it is considered self-executing (Garcia, 2015:12). There are three reasons as to why a treaty may be considered non-self-executing: (i) the agreement will not become effective as domestic law unless there is an enactment of implementing legislation, (ii) Congress by resolution, or the Senate to give consent to the treaty, need implementing legislation, and (iii) implementing legislation is constitutionally required (Garcia, 2015:12).

For the United States to become legally bound[89] under an international agreement, a series of steps need to be completed (Barbour, 2010:5). If the United States pursues a treaty as a means of entering into an international agreement there are three steps that need to be undertaken before it can become federal law (Barbour, 2010:5). The first step involves the United States signing the treaty, the second is that the Senate needs to then review the submitted agreement for its review and consent, and in order for the agreement to be approved, two-thirds of the Senators need to indicate their approval; and lastly, the President is able to ratify the agreement accepting its terms for accession or ratification (Barbour, 2010:5).

Hovi *et al*. (2010:4) explain that with regards to a treaty[90], the Senate may either approve it with conditions, reject and give back the treaty, approve it as written, or prevent the participation of the United States by withholding its approval (Hovi *et al.*, 2010:4). The Senate will oppose multilateral environmental agreements when they incur domestic changes

[89] In the US legal system, international legal commitments are binding upon it both domestically as well as internationally (Garcia, 2015:1).

[90] The status that an international agreement is able to attain in the context of the US legal system will depend on a number of factors (Garcia, 2015). There are two ways in which the term treaty may be understood from a legal viewpoint (Garcia, 2015:2). A treaty, in the context of US law, refers to an agreement that is negotiated and signed by the executive, but it can only enter into force under the approval of two-thirds of the Senate after which it can be ratified by the President (Garcia, 2015:2; Barbour, 2010:5). Then there is treaty in terms of domestic US law wherein "treaty" is understood to be a subcategory of binding international agreements (Garcia, 2015:2; Barbour, 2010:5). Executive agreements, however, form the most common type of agreements that the United States enters into (Garcia, 2015:4). The executive enters these types of agreements which do not need to be submitted for the advice and consent of the Senate although Congress does need to be notified if the United States enters such an agreement (Garcia, 2015:4).

that will sustain a redistribution of costs and benefits amongst states and constituencies (Bang *et al*., 2012:757). As such, divergences in natural resource endowments as well as public opinion amongst states create a disagreement amongst law-makers and distributional politics plays out (Bang *et al*., 2012:757).

Nonetheless, there is a category of agreements that follow a different path to becoming US law, namely executive agreements (Barbour, 2010:5). What distinguishes these agreements is that such agreements do not require either the Senate's consent or advice (Barbour, 2010:5). Non-self-executing agreements depend on Congress for the enactment of implementing legislation that would change the agreement's provisions into US law and give the necessary agencies and departments the authority to comply with and enforce this - even if it were an executive agreement (Barbour, 2010:5 – 6; Bang *et al*., 2012:756; Garcia, 2015:1). By being ratified by the Senate, these treaties attain the status of federal law and are therefore binding in terms of their implementation (Skodvin and Andresen, 2009). The consequence is that the Senate is weary of ratifying agreements which contain specific commitments unless these have already been contained within federal law (Skodvin and Andresen, 2009).

The president's jurisdiction within negotiations stem from his having executive powers to negotiate and conclude a particular international treaty – regardless of whether or not the Senate will approve its ratification (Hovi *et al.*, 2010:4; Grimmett, 1999). He also has the final say regarding the finalisation of a treaty and has the authority to assemble the negotiating team and provide them with their negotiating mandate (Hovi *et al.*, 2010:4). Although the president depends on the Senate for its advice and consent, he can nonetheless, pursue either a treaty or an executive agreement in order to enter into a legally-binding agreement (Barbour, 2010:5).

Thus, the final decision to sign a treaty is ultimately his choice even if the Senate does not give its consent (Hovi *et al.*, 2010:4 - 5). Nevertheless, the President is expected to inform the necessary leaders and committees within Congress regarding his desire to enter into negotiations for a new treaty, and to simultaneously hold Congress in consultation regarding the design of the agreement (Hovi *et al.*, 2010:5). However, the US political system is influenced by legislative restrictions which has implications for domestic measures aimed at the mitigation of climate change, whereby Percival explains that, "…Even though the president has unsurpassed ability to persuade agency heads to adopt policies he favours, he

does not have legal authority to dictate the content of decisions entrusted by statute to agency heads." (2014:136).

This dichotomy regarding the legal status between the development of its domestic and foreign policy can be traced to the unique legal system that the United States inherited from the British: a dual system highlighting the supremacy of Parliament wherein "the international and domestic legal orders do not intersect except through the operation of some mechanism linking the two." (Wirth, 2015:17). This separation creates a dichotomy between the international and domestic settings which are categorised as legally as well as conceptually distinctive: "meshing the two can under some circumstances be complex, a form of a two-level game." (Wirth, 2015:17 - 18).

The terms *convention* and *protocol* do not necessarily articulate whether these climate change agreements are legally-binding either under international or domestic law (Barbour, 2010). "Under international law, an agreement is considered binding only if it conveys the intention of its parties to create legally-binding relationships and has entered into force" (Barbour, 2010:4). The term convention may indicate an area of international relations that is not of intrinsic importance to the relations amongst states (Barbour, 2010:3). Usually, conventions cover a narrow scope and focus on "a single clearly determined object" (Barbour, 2010). Under international environmental law, a framework convention typically refers to guidelines which parties utilise to target an issue and the related details surrounding implementation that can be developed by subsequent agreements (Barbour, 2010:3). Protocols, on the other hand, are not usually foundational agreements in inter-state relations (Barbour, 2010:3). Rather, the intention of the Protocol is to interpret, supplement, modify, or clarify the "provisions of a primary instrument" (Barbour, 2010:3). Therefore, the variety of terms used in international negotiations do not necessarily give an indication of its legal status (Barbour, 2010).

To directly link this provision in the US Constitution to its position in the global climate change negotiations, this position is designed by the executive branch of government (Depledge, 2005:12). The executive branch consists of the President, and related departments, as well as agencies, such as the Department of Energy, Department of State and the Environmental Protection Agency (EPA), which create the USA's position endorsed at international negotiations (Depledge, 2005:12). Depledge further points out that, "Any significant domestic action on climate change at the federal level in turn requires extensive coordination and a complex approval process, involving the executive and its many agencies,

the two houses of Congress" as well as the fifty states (2005:12). While US presidents do have considerable influence over foreign policy under the Constitution, the President is still obliged to "share his powers with Congress" as part of the separation of powers inherent in the US political system (Skodvin and Andresen, 2009; Depledge, 2005:12).

The executive branch of government bears the responsibility concerning the implementation and enforcement of US laws (CAR, 2010:9). A number of offices which have essential roles in the formulation of US climate policy in the Executive Office of the President include the Office of Science and Technology Policy, the National Security Council, the Council on Environmental Quality and the Office of Climate Change and Energy (CAR, 2010:10). These departments assist the President to administer and enforce rules and regulations, to propose legislation, as well as to implement Executive Order (CAR, 2002:12). There does not exist a single department in the United States that has individual authority to deal with the multitude of issues surrounding climate change (CAR, 2002:12). "Within the executive branch alone, some two dozen federal agencies and executive offices work together to advise, develop, and implement policies that help the US government understand the workings of the Earth's climate system, reduce GHG emissions and US dependence on oil, promote a clean energy economy, and assess and respond to the adverse effects of climate change." (CAR, 2010:10).

The legislative branch of the US government, that is the US Congress, comprises two bodies, these being the Senate and the US House of Representatives, each having equal jurisdiction over lawmaking. The bicameral structure of the US Congress was designed to divide power on the basis of representation based on statehood and representation based on population. The House consists of 435 members, each one drawn from a single congressional district containing on average 650 000 people (CAR, 2010:10). The Senate, conversely, consists of 100 members which is an aggregate of two drawn from the fifty US states (CAR, 2010:10). Each house has the authority "to develop legislation" (CAR, 2010:10). There are two main ways in which Congress influences environmental policy: (i) oversight of the federal executive branch and (ii) the creation of laws (CAR, 2002:12).

US foreign policy is not created in a vacuum (Grimmett, 1999). Rather, the process of formulating foreign policy involves multiple levels and numerous individuals, each vying for influence over the process (Grimmett, 1999). Concerning the relationship between Congress and the President in determining which aspect they will influence and the final foreign policy

outcome depends on numerous factors and each branch plays a crucial yet different role in this process.

4.4 A History of the United States in the UNFCCC Negotiations

The United States has occupied a unique, often controversial role, in the global climate change negotiations (Matthew and Paterson, 2005:71 – 72). At the same time, the United States is recognised as an indispensable actor within the highly fragmented global climate change regime[91], and the necessity of its leadership and cooperation is unquestioned since it is responsible for the majority of total emissions and has considerable political as well as economic influence to provide the resources needed for the creation and establishment of such agreements and in determining whether or not these will be successful (Parker *et al.*, 2014:8, 15). At the start of the negotiations, the USA was the world's biggest emitter of greenhouse gases (GHGs)[92] on both a per capita as well as gross basis and according to 2008 data it was responsible for approximately a fifth of global emissions (Selin and VanDeveer, 2011:121; Agrawala and Andresen; 1999:457; EPA, s.a.). Not only is its leadership in the negotiations imperative to limit emissions but its cooperation is necessary to also assist other nations to transition away from fossil-fuel based energy systems (Parenteau, 2004:365). What complicates any analysis of the USA's position is that the politics of climate change in the United States are highly contested and complex offering numerous examples as well as counter-examples of action and inaction. While federal level attempts to regulate climate change remain strained, at the state- and municipal-level, many progressive policies and initiatives have been implemented such as California's Global Warming Solutions Act of

[91] According to Keohane and Victor (2010:2), there does not exist an overarching, comprehensive regime for the governance of climate change. Rather, attempts at this governance have established a number of regulatory regimes that focus on various aspects of the phenomenon which are at times complementary with one another and at other times conflictual (Keohane and Victor, 2010:2). This diverse set of regulatory regimes are described by Keohane and Victor as a regime complex for climate change, which falls "between comprehensive international regulatory institutions, which are usually focused on a single integrated legal instrument, at one end of a spectrum and highly fragmented arrangements at the other" (2010:2).

[92] The trajectory of US emissions has changed over time. By 1999, the USA's total GHG emissions were approximately 12% higher than what they were in 1990 (CAR, 2002:5). CO_2, the greatest source of US emissions, represented 82% of total US emissions with fossil fuel combustion being responsible for the majority of these emissions (CAR, 2002:5). By 2011, the USA's emissions were 6.5% below its 2005 levels (CAR, 2014:8). This contrasts with previous trends where US emissions grew by 1% per annum between 1990 and 2005 (CAR, 2014:9).

2006, the Massachusetts Regulation of Electric Utility Emissions of 2001 and state-level renewable portfolio standards (CAR, 2014:13; CAR, 2002:62).

The relative power positions of states within the negotiations are not static but alter over time (Parker *et al.*, 2014:9). The USA's position in the climate change negotiations can be understood to be embedded along two dynamics, one domestic, and the other international. Due to this embeddedness, the United States' foreign policy position in the global climate change negotiations has not remained static but instead; its position in the UNFCCC has varied over time throughout successive administrations (Downie, 2013:22). During the intervening two decades, the context of the negotiations has also altered with new actors gaining influence and adding their pressure to its outcomes (Parker *et al.*, 2014:8). What this illustrates is that preferences, rather than being static, are fluid and are dependent on the state of the negotiations and domestic political incentives and constraints (Downie, 2013:23).

The purpose of the following section is to create a chronological discussion of the history of the USA's position in the global climate change regime and the development of its energy policy during this period and the areas of convergence and divergence between the two. Special attention will be paid to critical moments in the history of the UNFCCC and the position assumed by the USA therein. By analysing the history of the development of this regime, it is possible to gain better insight into how various key issues were framed therein (Wirth, 2015:3).

4.5 The Origins of Environmental Problems

As an environmental predicament, climate change emerged in conjunction with other environmental issues in the mid-twentieth century. While some of the environmental issues that emerged in this period were domestic problems, others were global, or transnational, in nature. The growing awareness surrounding ecological degradation related to deforestation, desertification, biodiversity loss, population growth, acid rain, and pollution all pressured for the design of effective policies at the national and oftentimes regional level, to deal therewith (Momtaz, 1996:263; Mansfield, 2008: 235, 236). Due to the associated negative effects of these environmental problems on communities, wildlife, agricultural practices, and economic activities; in 1968, the Economic and Social Council (ECOSOSC) became worried about the perceived threats of environmental degradation and requested that a world conference be organised on the issue of the environment at the United Nations General Assembly (Momtaz, 1996:261). This resulted in the UN Conference on the Human Environment, which took place

in Stockholm, Sweden in 1972, otherwise known as the Stockholm Conference (Momtaz, 1996:261).

Beginning with the Stockholm Conference, since the 1970s a number of environmental regimes have been established to tackle regional and global environmental problems (Mansfield, 2008:236). These conferences mostly focused on local ecological problems whose effects were more manageable to reverse therefore posing no real threat to economic activities and productivity (Bodansky, 2001:23). Yet, since the Stockholm Conference and through to the present, these regimes have continuously been the centre of controversy surrounding such contentious questions as to what qualifies as an environmental problem, who is responsible for these, what should their solution be, and who ought to pay for the damage and related solutions (Mansfield, 2008:236).

In the Cold War context of the 1970s, and its ideological competition between the Soviet Union and the United States, these environmental negotiations were torn between the developmental needs of the South versus the ecological concerns of the North (Mansfield, 2008:237). Northern concerns over population growth and resource depletion were compounded by the OPEC and Iranian oil crisis of the 1970s and the calls by the South for the establishment of a New World Economic Order, which heightened developed countries' concerns over global stability in light of growing ecological hazards and associated resource depletion. The tension between economic growth and environmental protection which emerged as a forceful theme at the time would characterise all further negotiations.

4.5.1 The Emergence of Climate Science and the UN Environmental Negotiations 1950s – 1970s

The advancement of scientific knowledge about climate change had been integral in making this a prominent issue in domestic and global politics. Because climate change presents a problem that is global in nature, its solution required nations to deliberate in international forums to find an all-encompassing solution. The emergence of climate change in the twentieth century must be understood in the nuanced context of emerging environmental problems ranging from resource depletion, pollution and acid rain, to shifts in the international system from the bipolar Cold War structure, as well as alterations in the relationship between the developed nations of the North and the developing nations of the South. Throughout this period, the USA's hegemonic position was prominent in advancing scientific knowledge on climate change as well as establishing international regimes to deal

with climate change as well as other environmental problems. This position could be used to advance the USA's national interests as well as give other states the incentive to join these regimes and accept their legitimacy.

Since the late 1950s, the United States of America has provided the largest scientific contribution to the emergent study of the climate change phenomenon through such scientific discoveries as the creation of general circulation models which have been instrumental in establishing future climate scenarios (Sprintz and Weiß, 2001:77; Agrawala and Andresen, 1999:457). At the time, the USA occupied a hegemonic position in the scientific arena giving it a niche therein. The advancement of such knowledge was essential in improving the understanding of climate change and its effects (Bodansky, 2001:24). By the 1960s, observatories on the island of Mauna in Hawaii were able to gather evidence through precise measurements that the level of CO_2, the primary gas causing climate change, was increasing (Bodansky, 2001:24).

At the outset, the emergence of this scientific knowledge compelled the federal government to action. Such was the haste that by 1970, the first report which contained two chapters on climate change as well as global warming was produced by the Council on Environmental Quality in *The First Annual Report of the Council on Environmental Quality* (Percival, 2014:139). Since then however, a gulf has developed between the epistemic community that endorses climate science and has turned climate change into an issue of public as well as political concern, and the policy community which is concerned with the abatement costs associated therewith (Sprintz and Weiß, 2001:77; Agrawala and Andresen, 1999:457). This section outlines the emergence of the US position in the global climate change negotiations and its development in relation to US energy policy, as well as its international environmental policy in so far as it applies to the UNFCCC. Due to the environment's intersection with and input into economic processes and development, it raises contrasting sets of issues for negotiating countries.

As a hegemonic state, the USA played an active role in tackling environmental problems and creating multilateral environmental regimes in the 1970s and 1980s – regimes which in turn served its self-interest and gave it a relative advantage in relation to other nations (Falkner, 2005:585; Kelemen and Vogel, 2009:1). In fact, at the time, the USA accused European countries of being laggards in enforcing stringent environmental treaties and controls (Falkner, 2005:585). Although European states ratified these treaties, US hegemonic

leadership was a critical element in ensuring the establishment and acceptance of these regimes, while many European countries were in many instances reluctant to do so (Kelemen and Vogel, 2009:1). In some cases, European countries attempted to weaken or impede these treaties, such as treaties related to depletion of the ozone and acid rain (Kelemen and Vogel, 2009:6, 25). On the other hand, the United States was a key actor in the preparation for the historic United Nations Conference on the Human Environment, and by the mid-1980s, the United States was an essential actor in the negotiations that led to the establishment of the Montreal Protocol on Substances that Deplete the Ozone Layer (Kelemen and Vogel, 2009:2).

With regards to international environmental negotiations, the USA was a leader in the advancement of the negotiation and ratification of Multilateral Environmental Agreements (MEAs) because its environmental laws were more progressive in relation to similar industrialised countries, while it had the resources and material power necessary to provide incentives and compel other states to join (Bang *et al*., 2012:756). Such environmental treaties and controls however, did not undermine its economic competitiveness and international position. Because of its prominent position, during these negotiations, the USA could pressurise other states to cooperate on the basis of its existing domestic legislation without the need for domestic support for such initiatives (Bang *et al*., 2012:756). In particular, the USA was instrumental in designing the architecture of early environmental regimes such as the Vienna Convention for the Protection of the Ozone Layer, as well as the Montreal Protocol on Substances that Deplete the Ozone Layer, and had been an early signatory and ratifier of these treaties under the Reagan presidency (Percival, 2014:139). These two environmental regimes have set the precedent as the "most successful multilateral environmental agreements in history" (Percival, 2014:139). In spite of the ideological differences between administrations, the USA has supported environmental protection, so long as this did not undermine its perceived national interests and position in the international system.

4.5.2 Ronald Reagan, the Montreal Protocol, and the Emergence of Climate Change on the Political Agenda

A number of important trends emerged in the 1980s which increased the importance of climate change on the US political agenda. In the specific context of the United States, in spite of earlier federal and scientific interest, climate change really emerged as an issue of

political interest in 1980 under the Carter administration (Agrawala and Andresen, 1999:458). In fact, the President's Council on Environmental Quality had reiterated that climate change was a problem that was the USA's responsibility which required the USA's action to find a solution (Agrawala and Andresen, 1999:459).

This position was promptly reversed by his successor, Ronald Reagan, during his administration's years in the White House between 1981 and 1989 (Agrawala and Andresen, 1999:459). Yet, in spite of this executive inaction, between the early and mid-1980s, a few members of Congress were beginning to attend hearings on this new phenomenon with more urgency (Agrawala and Andresen, 1999:459). The increased attention that was beginning to emerge towards this new policy issue would pressure Reagan into signing the Global Climate Protection Act in 1988 which articulated that the President had to submit a plan for review to Congress in regards to the stabilisation of emissions (Agrawala and Andresen, 1999:459).

In the midst of this political interest, the Montreal negotiations set an important precedent to the global climate change negotiations (Yergin, 2012:458). In 1985, scientists from the British Antarctic Survey discovered a "hole" in the ozone layer which was caused by a group of chemicals called chlorofluorocarbons (CFCs) which had been developed in the 1920s (Yergin, 2012:459). The impact of this scientific discovery and potentially adverse environmental consequences were critical in increasing the necessity of negotiating a solution. Scientific evidence indicated that this would have serious consequences for human and ecological well-being which prompted a quick response to the threat such that by 1987, a mere two years after the discovery, the Montreal Protocol to restrict CFCs came into effect after it was endorsed by twenty four states (Yergin, 2012:459 - 460).

The Montreal Protocol established an important precedent for climate change as it indicated the haste with which the global community could act towards a perceived environmental threat (Yergin, 2012:460). Within this context, the United States occupied an important leadership role in establishing the economic and scientific basis upon which to solve this issue (Hahn, 1994:307). However, there was a crucial difference between CFCs and GHGs, which Yergin (2012:460) points out,

> "The Montreal Protocol…acknowledged that increasing concentrations of greenhouse gases was dangerous. It dramatically underlined the acceptance of the notion that human activity imposes costs on the earth's atmosphere. And it demonstrates that countries could come together quickly and agreed to eliminate a common environmental threat…There was one striking

> difference, however. The relevant universe was so much smaller. Fewer than forty companies manufactured chlorofluorocarbons, and just two had half the market. But the whole world burned fossil fuels."

Theoretically, the Montreal Protocol raises some interesting issues for realism concerning cooperation, especially in international environmental relations, and the conditions that enable it. To a limited degree, countries are able to cooperate, especially when their interests are at stake. The type of problem that the Montreal Protocol addressed helps to illuminate its successful employment. The Montreal Protocol would not distribute unacceptable costs to states, nor give one set of nations a relative advantage over others, and unlike fossil fuels, CFCs are not critical for a nation's (energy) security. In the early years of the deliberations surrounding climate change, policy makers, impressed by the success of the Montreal Protocol, used many of its key features in the design of the later UNFCCC, some of the significant features that were implemented were its top-down approach, the distinction between developed and developing nations, the responsibility of developed countries regarding incremental costs accrued to developing countries for mitigation, as well as the quantitative limits on the production and consumption of CFCs (Bodansky, 2011:699 – 700). For a variety of reasons, climate change proved to be a far trickier problem.

4.5.3 Congressional Concern and International Co-Ordination

By the 1980s, compelling scientific evidence emerged which showed that the climate was indeed changing, that its cause was largely the result of human activities and, its affects would be detrimental to human well-being (Yergin, 2012:458). Scientific evidence surrounding the negative repercussions of this weather phenomenon drove public debate and media coverage for the issue (Yergin, 2012:458). Through the momentum that was generated due to this concern and increasing awareness about climate change, a process of interaction between the epistemic community and policy-makers emerged (Yergin, 2012:458). The particular urgency surrounding climate change in the 1980s was a reaction to a host of other environmental challenges that swept through the era such as deforestation, acid rain, and ozone depletion (Paterson, 1996:60).

Climate change however would emerge on to the mainstream political agenda when the first hearings to be held on the climate change phenomenon by the United States' Senate took place in July 1988 (Yergin, 2012:457; Paterson, 1996:60; Agrawala and Andresen, 1999:459). This occurred in the midst of severe draught and heat waves experienced in North

America in the summer of 1988 (Agrawala and Andresen, 1999:459). These hearings were a turning point in the politics of climate change as it was at this point that climate change would emerge as an issue that required political attention in the United States (Yergin, 2012:457). Because, an era of economic abundance was experienced during the 1980s, this limited the usual economic objections to environmental regulation and especially in 1988 (which at the time was the hottest year yet recorded), contributed to the sense of urgency surrounding the claims of scientists in regards to climate change (Paterson, 1996:60; Agrawala and Andresen, 1999:459; Yergin, 2012).

A week after the historic Senatorial hearings, the basis for a global climate change regime would begin to take form during a global conference, *Changing Climate: Implications for International Security,* which was sponsored by the Canadian government (Agrawala and Andresen, 1999:459). Pivotally, the conference reiterated the view that climate change was anthropogenically-induced and that industrialised countries bore the primary responsibility for its creation and were urged to limit their emissions "by 20% from 1988 levels by 2005" (Agrawala and Andresen, 1999:459). These set of events would make climate change a significant issue in George H.W. Bush's 1988 presidential campaign, a campaign in which he defended himself as an environmentalist, while contrasting himself to the anti-environmental stance often portrayed by president Reagan (Agrawala and Andresen, 1999:459; Kelemen and Vogel, 2009:12).

By the late 1980s, in spite of these perceived challenges, spurred by growing alarm over the evidence produced by climate change science, as well as growing public concern, policy-makers adopted three main mechanisms to deal with this challenge at the international level (Paterson, 1996:60; Wirth, 2015:3). The first mandate was the creation of the Intergovernmental Panel on Climate Change (IPCC)[93] in 1988 which was tasked with creating an overview of the scientific consensus regarding climate change for policy-makers (Paterson, 1996:60; Wirth, 2015:3). The second was the organisation of a number of high-level conferences in which politicians could work out their preferred policy options to deal

[93] The IPCC, which would exert influence over the negotiations throughout its history, was established under the mandate of the World Meteorological Organisation (WMO) as well as the United Nations Environment Programme (UNEP) which authorized the IPCC to gather and synthesise all the available scientific evidence on climate change led by teams organised by scientists from around the globe (Wirth, 2015:3). Its reports were organised around three principal themes, "(1) the physical science basis of climate change; (2) impacts, adaptation and vulnerability; and (3) mitigation of climate change" (Wirth, 2015:4).

with this challenge (Paterson, 1996:60 - 61). Lastly, countries pledged unilateral targets aimed at limiting the emission of CO_2 at 1990 levels by the year 2000 (Paterson, 1996:61). The accelerated pace developed by these three responses created the global negotiations to establish an international convention that could respond to climate change (Paterson, 1996:61).

4.6 US Energy Policy and Climate Change Mitigation

Attempts to integrate GHG mitigation into US energy policy and economy have been a complex exercise, resulting in a dialectic approach towards the design of US energy policy (Parker *et al.*, 2011:1). The phenomenon of anthropogenic climate change, and modern energy production and consumption, are linked since the latter is primarily responsible for the former. In addition, there is a strong relationship between GHG emissions and economic growth (Parker *et al.*, 2011:1). Thereby, any action to mitigate climate change would have serious implications for the structure of the USA's energy system and economic activities. It is important to emphasise that such actions would have consequences and costs not only for the vested interests involved in the fossil fuel and automobile industries, but also for the economic competitiveness and ranking of the United States in an anarchic and competitive international system. Historically, US competitiveness relied on the cheap supply of energy to replace more costly capital as well as labour costs (Parker *et al.*, 2011:1). Its hegemonic position in the international system was further influenced and enhanced by its control of the global petroleum system in the post-Second World War context which allowed it to gain access to cheap petroleum supplies both for itself and its allies.

Per consequence, one of the fundamental contradictions that US policy-makers had to solve was the tension between economic growth and the regulation of greenhouse gases (GHGs) (Legault, 2008/2009:146). In this regard, two issues were prominent in this concern: (i) the relationship between energy and the environment and, (ii) the relationship between energy and the economy (Department of Energy, 1994:74). Since the separation of power has been the bedrock of American politics, reconciling opposing political viewpoints has been a prominent challenge for various administrations when attempting to formulate a coherent energy policy. Energy policy has thus been a prominent, yet controversial, theme for Congress since the energy crises of the 1970s (Ratner and Glover, 2014).

4.7 The Bush Administration's Energy Policy

Executive administrations are simultaneously constrained by both the international and domestic systems in their pursuit of policy objectives. While policy-makers within the Republican Bush administration developed particular policy goals based on the influence of systemic incentives, they had to be aware of domestic constraints on these. As such, the relative abundance of the 1980s would give way to two important policy issues, the Iraqi invasion of Kuwait, which would place renewed emphasis on energy security, and the UNFCCC. By 1989, the Bush administration was working towards creating a comprehensive National Energy Strategy, "We cannot and will not wait, for the next energy crisis to force us to respond." (Department of Energy, 1994:61). Thereby, the National Energy Strategy of 1991 and the Energy Policy Act of 1992 were designed to achieve "continued economic growth, increased energy efficiency, strong environmental protection, and then a reduced dependence on foreign oil" (Bush, 1991(b)). However, at the outset of the Bush administration, it appeared that there was no coherent manner to integrate the various elements and objectives that an energy policy should consist of (Department of Energy, 1994:51, 61).

4.7.1 Structural Influences

Historically, domestic energy resources have been relatively inexpensive and abundant within the USA, especially characterised by relatively low-cost petroleum prior to the energy crises of the 1970s, while the USA also had lower taxes on energy in comparison to other developed countries (Joskow, 2001:4). At the structural level, this permitted the USA to be more competitive relative to its economic rivals through lower energy prices in place of higher labour and capital costs (Parker *et al.*, 2011:1), while simultaneously though its hegemonic position it wielded influence over the global supply of petroleum, a resource of both economic and geopolitical significance during its rivalry with the USSR within the bipolar structure of the international system. With the energy challenges of the era, it is not surprising that during the 1970s and 1980s, energy policy developed in response to "energy and economic security" as inexpensive energy was the source of US power and security within the anarchic international system (Joskow, 2001:13). By the start of the Bush administration, the USA's dependence on imported petroleum was increasing (Joskow, 2001:7). As the international distribution of power changed from a bipolar to a unitary system

at the start of the Bush administration, this would influence how self-interested states "provide for their security" (Waltz, 2000:5, 6).

Under the Bush administration (1989 – 1993), three formidable events took place which would have important implications for US energy policy: the collapse of the Soviet Union, the Iraqi invasion of Kuwait, and the establishment of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992. The USA's response to these events was influenced by the logic of anarchy and its position as hegemon whose influence was filtered through factors found at the unit-level. The international system is characterised by the continuous struggle for power therein. The demise and eventual breakdown of the Soviet Union in the late 1980s would leave the USA as the sole superpower in a unitary system. With the threat and rivalry between the USA and the Soviet Union no longer a factor in strategic calculations, policy-makers could pursue a new set of priorities and strategies. Nonetheless, with one threat diminishing a new set emerged. Although military calculations would somewhat decrease, economic competition would emerge as a central preoccupation as the United States would have to be concerned with the economic competition between itself, European countries, Japan and to a lesser degree China. The elegance of the bipolar system could permit policy-makers to pursue a set of well-defined military strategies to contain the Soviet threat. Economic challenges and strategies were less clear-cut. Therewith, the Bush administration came to power during a time of flux in international and energy[94] systems.

By the 1980s, although energy systems were characterised by ample and stable supplies, increased awareness of environmental degradation related to energy use required policy intervention and restricted certain policy options. Especially climate change and other environmental issues became more prominent in public and political spheres and applied

[94] The end of the bipolar world order was succeeded by the emergence of globalisation as a prime feature of the global political economy (Gilpin, 2001:3). While globalisation has a number of features, a crucial aspect of this phenomenon is that states and their economies became increasingly integrated and interconnected (Yergin, 2012:12). With this transformation set in place, the emphasis placed on military strength and traditional notions of armed security on the global agenda were relaxed somewhat, although this was regionally differentiated (Luttwak, 1990:16). Globalisation impacted energy markets with the deregulation and privatisation which commenced in the 1970s becoming entrenched in the 1990s (Yergin, 2006:34; Yergin, 2012:12). There had been three crucial implications of globalisation on the energy system which were the acceleration of demand, structural transformation of the petroleum industry, which increased the use of natural gas for electricity generation in many countries (Yergin, 2006).

pressure on energy policy design. Therewith, due to these structural changes and their security implications, the Bush administration promoted the National Energy Strategy of 1991 and subsequently the National Energy Policy Act of 1992 (EPACT92).

In 1991[95], the collapse of the Soviet Union transformed the international system from the bipolar system dominated by the competition between the United States and the USSR to a unipolar order dominated by the United States (Westphal, 2006; Van der Linde *et al.*, 2004). The end of the Cold War was prematurely heralded as a new era of prosperity and peaceful relations among nation-states - the start of the so-called *end of history* (Fukuyama, 1992). This initial optimism would be very short-lived as conflict and the struggle for power characterise the international system because of anarchy. Thus, the first major petroleum crisis of the post-Cold War era was the Iraqi invasion of Kuwait[96] in August 1990 by Saddam Hussein which disrupted the supply of petroleum to the world market, once again raising fears over energy security and thereby national security (Yergin, 2012:9 - 10; Hamilton, 2009:220). At the time of the Iraqi invasion of Kuwait, there was approximately 5.5 million barrels per day of spare capacity, which was sufficient to supply around 8% of global demand and ease the pressure of the petroleum lost from the warring countries (Brown *et al.*, 2006:6). In spite of this, petroleum prices increased from $21.50 per barrel in January 1991 to $28.30 in February in reaction to the lost petroleum supply (Brown *et al.*, 2006:6). The Iraqi invasion of Kuwait thus introduced an energy crisis by increasing the cost of petroleum and natural gas (Joskow, 2001:1).

In response to the Kuwait crisis, the Bush administration led Operation Desert Shield in order to curb further Iraqi operations (Department of Energy, 1994:62). Under the auspices of the United Nations and the leadership of the United States, a coalition was quickly formed, which included Russia, to oust Saddam Hussein from Kuwait and provide stability to the world's petroleum market (Yergin, 2012:11). With the absence of the Soviet threat, the United States' pursued a role in maintaining control over the supply of petroleum that could depend on

[95] The end of the Cold War was formally announced by George H.W. Bush in November 1990; however the iron curtain collapsed in December 1991 (Department of Energy, 1994:68).

[96] Saddam Hussein wished to gain control of Kuwait's rich petroleum fields (Yergin, 1991:12). Had Saddam Hussein successfully annexed Kuwait, collectively Hussein's petroleum reserves would equal that of Saudi Arabia's and would allow him to dominate petroleum production in both Arab states as well as the Persian Gulf where world petroleum reserves are concentrated (Yergin, 2012:9; Yergin, 1991:12). This would have allowed Saddam Hussein to accrue tremendous power both regionally and globally (Yergin, 1991:12).

multilateral cooperation because of its hegemonic position in a unipolar system which allowed it to successfully balance with other states against Iraq, although this role was still influenced by the Truman and Carter Doctrines. In light of the security threats posed by Iraq's invasion of Kuwait, policy-makers once again had to consider whether security of supply should determine fuel choice with domestic energy sources, ranging from coal to nuclear dominating the energy mix (Cable, 1995:306).

Thereby, due to the changing distribution of power in the international system and trends related to security in the international system, the administration promoted a policy framework, the National Energy Security Act of 1991 and its follow-up the National Energy Policy Act of 1992, which emphasised a number of objectives such as improving the international competitiveness of American industries, while petroleum was highlighted as a prime vulnerability for the United States (Department of Energy, 1994:66). Certain measures were considered by the administration that would reduce imported petroleum through government regulation and market mechanisms, however, in the end the administration did not support these because of the higher cost that this would incur to consumers and a corresponding decrease in the competitiveness of US industries (Department of Energy, 1994:67). Likewise, certain measures aimed at increasing renewable energy production and efficiency were not accepted because of the economic costs that these would have incurred (Department of Energy, 1994:67). Such actions by the administration will correspond to the logic of anarchy wherein states will pursue those policy objectives that will increase their states' material capabilities and latent power in relation to other states at the expense of other policy goals that are perceived to be of lesser importance in this regard. Power, however, is multi-dimensional, and the policy objectives that amplify it are not obvious, nor does their combination always lead to desired outcomes.

In addition, as a result of the end of the Cold War, with the demise of the bipolar distribution of power, one of the major alterations was the decline in defense activities and its associated arms race which figured previously in energy policy which altered policy-makers' priorities in the energy sector in this regard (Department of Energy, 1994: 72, 76). Instead, attention was starting to be directed towards waste management and environmental restoration making environmental issues more prominent in energy policy design (Department of Energy, 1994:72). In the historical overview published by the Department of Energy, this was described as "defense activities were 'giving way to green.'" (Department of Energy, 1994:73). Clean coal became the most prominent energy initiative for the federal government

while renewable energy also received increasing attention (Department of Energy, 1994:71, 73). Change at the global level within the distribution of power in the international system was thus instrumental in influencing the USA's energy policy with greater emphasis being placed on economic competition between states (Department of Energy, 1994:76). Overall, the energy crisis of the early 1990s was less severe in magnitude than the energy crises of the 1970s, and did not have a severe economic impact (Joskow, 2001:1, 57), nevertheless, the National Energy Policy Act of 1992 was more focused on energy security and environmental regulation while the Bush administration emphasised a reliance on the market for the effective allocation of energy resources (Joskow, 2001:13).

The end of the Cold War, and the demise of the bipolar order, changed the structure of the international system. While the USA was still a hegemonic state, it found itself in a context characterised not only by a new set of challenges but also within a dramatically altered distribution of power. In this altered distribution of power at the structural level, economic strength became paramount in maintaining and enhancing US hegemony vis-à-vis the ascent of European countries and China that threatened the US position within the anarchic international system since economic competition, rather than military competition, characterised the new distribution of power (Waltz, 1993: 59 -60). The USA's survival would depend on a new approach to maintaining its economic strength. Although the demise of the Soviet Union reduced a prime threat that characterised the bipolar distribution of power, the Iraqi invasion of Kuwait would increase petroleum prices thereby posing a threat to US economic growth and thereby latent power (Joskow, 2001:13). With the demise of the Soviet Union, the USA relied on its hegemonic position to regain stability in global petroleum markets in cooperation with other states. However since its allies were no longer concerned about the military threat posed by the Soviet Union within an anarchic international system, there was a decreased reliance by these states on US protection. With economic competition being more pronounced and energy prices increasing, the Bush administration had to carefully consider balancing competing goals within its energy policy (Department of Energy 1994:53). Although states are always concerned with military threats because of the anarchic structure of the international system and the need to secure survival therein, the threat posed by economic competition is an important element of this consideration. Per consequence, the primary concern in the design of energy policy's goals still remained maintaining the competitiveness of the US economy since US hegemony depended on its economic strength.

It may thus be surmised that the emphasis on economic competitiveness was an imperative that increased in light of the ascent of competitors in the international system with the resultant change in the distribution of power, and the implications thereof for US power and security. As a result, while energy security and dependence on foreign petroleum were important policy goals, the primary motivation that facilitated or limited support for certain policy goals was the impact thereof on the cost of energy as this bore direct consequences for the ability of the USA to maintain its hegemonic position vis-à-vis its rivals. Within this altered distribution of power, the Bush administration supported the goals of energy security, efficiency and environmental protection within its energy policy (Bush, 1991). Due to the Iraqi invasion of Kuwait, energy security, with an emphasis on petroleum, became the primary goal of energy policy because of the need to reduce US vulnerability, especially the USA's reliance on unstable suppliers (Bush 1991). However, this goal had to be balanced with environmental protection in order to maintain low energy costs (Bush, 1991).

While environmental protection may have gained greater support by the Bush administration due to the demise of the Soviet Union, economic competition with other states along with the Iraqi invasion of Kuwait, would compel the Bush administration to place greater emphasis on reducing energy costs and securing a greater supply of petroleum. George H.W. Bush (1991) indicated that "…we are, I will be the first to concede, a long way from total energy independence. Our imports of foreign oil have been climbing steadily since 1985 and now stand at 42 percent of our total consumption. Too many of those oil imports come from sources in troubled parts of the world… We know that for domestic oil production, certain areas are offlimits, and justifiably so, for sound environmental reasons. But developing new, alternative energy sources takes time. Some sources of power face political problems. So, America will have to continue to import energy for years to come. We also know that unwise and extreme measures to reduce oil imports would seriously hurt the consumer in this country and will adversely affect the working man and woman in this country, American jobs, and American industries. In the face of these realities, we must act with care, but we must act comprehensively." While the Bush administration may have sought a balanced, comprehensive energy policy this was difficult to achieve in practice, due to the tension between these competing goals and the implications thereof for the cost of energy and therefore the USA's material capabilities and latent power. In addition, although the change in the distribution of power would give policy-makers the incentives to pursue certain broad goals related to US security and power by emphasising energy security and competitiveness, the substantive content of the policy and its overall coherence and efficacy would be

determined at the unit-level. The ability to compete economically in the international system would nonetheless compel the Bush administration to prioritise low cost energy and energy security at the expense of environmental regulation.

4.7.2 Domestic Influences

The Republican Bush administration responded to the changing incentives of the structure of the international system, yet the compatibility between policy goals and the way in which this administration determined to pursue these, and their efficacy, was determined at the unit-level through the particular perception of policy-makers within this administration as well as the federal structure of the US political system. Even though the Bush administration continued to rely on market operations, policy-makers within this administration were less ideologically-driven in comparison to the previous Reagan administration (Miller, 1995:720).

Although the Bush administration initially gave reassurance that there was sufficient and adequate supply to meet demand, world petroleum prices rose quickly after the Iraqi invasion of Kuwait with implications for US energy security and per consequence economic power (Department of Energy, 1994:64). The energy crisis would influence the Bush administration to design a national energy strategy and "to convince Congress to enact comprehensive energy legislation" (Joskow, 2001:1). Within this context, on the 20th of February 1991, the National Energy Strategy was presented to Congress by the Bush administration (Department of Energy, 1994:66). The Strategy hinged on free market operations, a reliance on the private sector and competition, as well as innovation, and limited government intervention as a means to secure these policy-makers' perceived goals of "an energy future that was 'secure, efficient, and environmentally sound'" (Department of Energy, 1994:66; Helm, 1991:1; Tomain, 2007:1203). While the energy policies of the 1970s were characterised by a prominent role for the federal government in designing and implementing these policies, the Bush administration continued with the limited role for government that was reinstated by the Reagan administration and that was reminiscent of the energy policies preceding the 1973 oil crisis. Within this context, according to the administration, the policy framework was committed to the goals of energy security as well as environmental protection (Department of Energy, 1994:66). According to Watkins, the National Energy Strategy "was the first such effort designed to provide energy security, environmental quality, and affordable energy through 'free market incentives, reduced regulation, and increased federal investment in research and development.'…Past attempts at charting an energy policy… 'have relied on controls, taxes, subsidies and regulation. Government alone cannot be the answer.'"

(Department of Energy, 1994:66). Yet, because of the federal structure of the USA, the Bush administration could not pursue their goals in a coherent manner because of Congressional input (NRRI, 1993:1).

A unique feature of policy-makers within the George H.W. Bush administration was their perception that the goal of environmental protection was not inconsistent with either energy security nor national security (Department of Energy, 1994:53; Waldman and Hulac, 2018; Schneider, 1991; Wampler, 2018) to the extent that it did not increase the cost of energy to consumers and industries and thereby not undermine US competitiveness nor allow its rivals to attain relative gains within international environmental negotiations (Waldman and Hulac, 2018). Thus, the goal of environmental regulation was promoted to the extent that it did not undermine US power and security relative to its rivals within the international distribution of power. Nevertheless, at the rhetorical level, the Bush administration stated that it wished to design an energy policy that could balance between the goals of environmental protection, energy security and low cost energy (Bush, 1991; Schneider, 1991). While energy security, economic growth and low cost energy would remain critical policy objectives, the continuous divide between Congress and the administration would stall the design of a coherent energy policy as there was divergence over the content of the policy (Department of Energy, 1994:61; Miller, 1995). Overall, while there was a perception amongst policy-makers within this administration that the goal of environmental protection was not incongruent with energy security and economic growth, the two latter goals would continue to be emphasised, while enhancing the competitiveness of US industries (Department of Energy, 1994:66; Wampler, 2018; Schneider, 1991). Thereby any measures that could increase the price energy were rejected often leading to an incoherent energy policy (Department of Energy, 1994:67):

> "Implementing these measures could reduce oil imports substantially, but the administration rejected them 'because the cost would very high – in higher prices to American consumers, lost jobs, and less competitive US industries.' Indeed, certain measures promoting energy efficiency and renewable energy production for which the Department had pushed hard were stricken from the National Energy Strategy because they would have cost the federal treasury too much money." (Department of Energy, 1994:67)

Within the federal structure of the USA, the National Energy Strategy received opposition from Congress which required compromise therein and would become the foundation for the subsequent Energy Policy Act of 1992[97] after a process of deliberation in Congress (Department of Energy, 1994: 68 – 70; 76; Miller, 1995). The Energy Policy Act of 1992 was thus very different to the strategy that was proposed by the Bush administration in 1991 (Joskow, 2001:14; Miller, 1995). While the 1991 strategy promoted by the Bush administration was based on supply-side initiatives to meet the policy's goals, after Congressional debate, the policy that would be enacted in 1992 was based on "creating tax and direct subsidies for energy efficiency and renewable energy technologies and on encouraging all states to develop and implement "integrated resource planning" (Joskow, 2003:13 – 14). While policy-makers within the Bush administration reacted to the incentives produced by the international system by developing a set of policy goals, the US federal system which was characterised by a division of power, would stymie the administration's ability to produce a comprehensive energy policy and react to these incentives. In its attempt to manipulate policy outcomes to meet certain objectives, the administration had to respond to internal constraints (Mastanduno *et al.*, 1989:459). The Congressional gridlock around the policy was viewed by the administration as the consequence of the intrusion of parochial interests rather than support for what Watkins termed "the national good" (Department of Energy, 1994:70). In spite of the deliberations and initial gridlock, an energy policy framework was adopted that was bipartisan and at the rhetorical level argued to be "pro-energy, pro-environment, and pro-growth", but nonetheless characterised by inconsistencies (Department of Energy, 1994:71; NRRI, 1993:1; Miller, 1995).

As such, the National Energy Strategy and the EPACT of 1992 received mixed reviews. One of the main criticisms aimed at the Strategy was that it would maintain US dependence on foreign petroleum such that 2001 import levels would be on par with those of 1991 (Department of Energy, 1994:67; see also Joskow, 2003:21 - 22). While it was hoped that there would be a reduction of imported petroleum, the two measures necessary to accomplish this, these being increased petroleum exploration in Alaska as well as increased auto efficiency standards were not accepted (Miller, 1995:720). Likewise, the Energy Policy Act

[97] The National Energy Strategy issued in 1991 had a prominent focus on energy security while the National Energy Security Act of 1992 placed emphasis on enhancing alternatives to "oil based motor fuels", energy efficiency standards, as well as renewable energy sources (Bohi and Tomain, 1993:1093).

of 1992 was criticised for containing a number of inconsistencies since it was based on political compromise in order to accommodate competing views from different interest groups within the US federal structure (Costello *et al.*, 1993:1; Miller, 1995; Joskow, 2003:13; Rossi, 1995:196).

In spite of these criticisms, unlike its predecessor, the Bush administration attempted to place greater emphasis on environmental protection. At the start of the Bush administration, it was perceived by its policy-makers that environmental protection was not inconsistent with energy security and national security (Department of Energy, 1994:53; Schneider, 1991; Van Orman, 1992: 253). Secretary of Energy, James D. Watkins expressed that, "I am confident…I can help find that desired and balanced formula wherein safety is never subverted, the environment is adequately protected, and national security and other energy objectives are achieved in harmony." (Department of Energy, 1994:53). In addition, the EPACT of 1992 was the first attempt to combine energy and climate change policy and relied on a least-cost strategy to stabilise and reduce US GHG emissions (Parker *et al.*, 2011:1; Schneider, 1991; Ellerman, 2012:16). Thereby, the mitigation of climate change became a policy goal when the United States ratified the UNFCCC in 1992 (Parker and Blodgett, 2008:1; Ellerman, 2012:16). In this regard, the Energy Policy Act of 1992 (EPACT92), which was principally designed in reaction to the Iraqi invasion of Kuwait, was also as a secondary response, designed in reaction to the UNFCCC (Parker and Blodgett, 2008:1). The Bush administration articulated eleven areas of EPACT92 that could assist the United States to reduce its emissions in its 1992 submission to the UNFCCC such as establishing energy efficiency standards and to also include climate change concerns into "energy policy planning" (Parker and Blodgett, 2008:1). At the time, such an approach was based on the perception that reducing US emissions could be achieved at little cost (Parker and Blodgett, 2008:3). It was further hoped that achieving the goal of reducing emissions could be a by-product of meeting other policy goals referred to as a "no-regrets" policy towards climate change (Parker and Blodgett, 2008:3, 7). The Bush administration promoted the use of voluntary reductions by industry which could allow the administration to pursue its policy objectives without requiring Congressional input at the federal level (Parker and Blodgett, 2008:7). Such emphasis on nationally determined and voluntary actions were endorsed since climate change mitigation would need to be integrated into US energy policy (Department of Energy, 1994:73). This would have important implications for the US position in the UNFCCC and its ability to cooperate therein.

4.8 The Rio Earth Conference, the Establishment of the United Nations Framework Convention on Climate Change (UNFCCC) and the North-South Divide

While the Cold War was marked by the ideological competition between the Soviet Union and the United States within the bipolar structure of the international system, when multilateral environmental negotiations emerged in the early 1970s, these negotiations were torn between the ecological concerns of the North and the developmental needs of the South (Mansfield, 2008:237). By the end of the Cold War, the context of multilateral environmental negotiations altered between the Stockholm Conference of 1972 and the Rio Conference of 1992 such that there were marked differences between the issues and context[98]. With the changing structure of the international system to a unipolar one, the traditional security concerns of the Cold War diminished, public concern regarding the environment increased, and energy was considered a security issue in the post 1973/1979 context (Najam and Cleveland, 2003:128). A key concern amongst developed and developing nations that would influence the negotiations was the convergence between energy and climate policy concerning different countries' responsibilities and abilities to alter their energy production and consumption patterns, "These debates during and after Rio have been defined principally by compulsions that lie at two distinct corners of the sustainable development triangle: the environmental compulsion emanating from the ecological stresses associated with specific energy production and consumption choices, and the economic compulsion derived from the central role of energy in economic growth." (Najam and Cleveland, 2003:128).

By the time of the Rio Earth Conference of 1992, the North-South divide between developed and developing nations strained cooperation in the UNFCCC from the outset (Heller and Shukla, 2003:135). During the negotiations, developing countries were clear that they would not accept an agreement that would impede their development while developed countries had nearly two centuries of economic development based on fossil fuel energy and emissions (Parks and Roberts, 2008:621). In the lead up to the Rio Earth Conference, developing countries continuously expressed concerns that their ability and right to economic growth and development would be curtailed, while developed nations would not curb their emissions unless developing nations did likewise showcasing a continuous concern amongst both

[98] Interestingly, the clause regarding the depletion of natural resources which had been a part of the Stockholm Declaration was not included in the Rio Declaration (Najam and Cleveland, 2003:128).

developing and developed countries about the implications for relative gains as a consequence of the outcome of the negotiations (Parks and Roberts, 2008:622).

The tension between economic growth and environmental protection which emerged as a forceful theme at the time would characterise all further negotiations - a prisoners' dilemma fraught with questions over natural resource use. While this tension between economic development on the one hand and environmental protection on the other were prominent themes in the Cold War era, the difference now was that security concerns gave way to economic concerns due to the altered structure of the international system, and in addition alliance formation changed since the East bloc could not act as an alternative that developing nations could rely on to the developed North that had characterised the bipolar anarchic international system.

4.8.1 The Creation of the UNFCCC

The Rio Earth Conference of 1992 thus took place amidst the shifting structure of the international system. The end of the Cold War alongside its East-West impasse spurred a sense of optimism that a new era of cooperation in international relations was emerging. In this exuberance, the Rio Earth Conference was believed to be a symbolic achievement of this new era. Within this context, the final outcome of the Rio Earth Conference hinged on US leadership. While the USA was a key player in the design of the UNFCCC, its role therein was starting to become increasingly controversial while domestic politics towards the climate change regime, while initially supportive, were beginning to become resistant. The US position needs to be understood within the contours of the changing international system.

The events of the 1980s combined to advance momentum to find a global solution to climate change. The joint effects of the discovery of the hole in the ozone layer and the publication of *Our Common Future* by the Bruntland Commission would firmly place climate change as well as other environmental issues at the top of the political agenda (Bodansky, 2001:23). Such was the momentum that by 1989, a series of negotiations were organised which would pave the way for the second UN conference on the environment to establish a regime to cope with climate change under the auspices of the General Assembly (Momtaz, 1996:262; Bodansky, 2001:23; Leggett, 2011:2). Between February 1991 and May 1992, the architecture for a global regime was negotiated under the Intergovernmental Negotiating Committee (INC) (Agrawala and Andresen, 1999:460).

Between the third and fourteenth of June 1992, the historic United Nations Conference on the Environment and Development (UNCED) took place in Rio de Janeiro (Momtaz, 1996:262). The conference specifically addressed questions surrounding the tension between protecting the environment, while simultaneously endorsing economic development within the political goal of sustainable development (Momtaz, 1996:262). The negotiations were complicated in the context of an international system made up of states that were legally equal under the ideal of sovereignty but economically were starkly inequitable resulting in unequal hierarchic positions and power relations. Under these circumstances, the related outcome of the Rio Earth Conference was that the United Nations Framework Convention on Climate Change (UNFCCC) was adopted and opened for signature on the ninth of May 1992 (Wirth, 2015:4; Momtaz, 1996:269).

The UNFCCC came into force on the twenty first of March 1994 (Barbour, 2010:1). Under this framework, countries are grouped into Annex I parties, that is developed countries who are historically responsible for the greatest contribution towards accumulated emissions, and non-Annex I parties, traditionally low-income, developing countries (Barbour, 2010:1). At this point, the UNFCCC did not mandate binding, quantified emission reduction targets[99] (Barbour, 2010:1). The UNFCCC as a multilateral climate regime is made up of a number of nested instruments (Wirth, 2015:3). The UNFCCC is a

> "procedurally-oriented instrument containing obligations for sharing and articulating certain broad substantive principles, but with few if any binding commitments to reduce greenhouse gas emissions. The word 'framework' in the title is a term of art, referring to an international regime established by a freestanding 'umbrella' multilateral convention to which are appended substantive protocols." (Wirth, 2015:4).

The "artefacts" mentioned in the final agreement included legally non-binding decisions, declarations, procedural formats, as well as amendments (Wirth, 2015:5). Article 3 of the UNFCCC mentions principles consisting of common but differentiated responsibilities, sustainable development, equity as well as precaution which guide the outcomes at the

[99] The UNFCCC endorses an "absolute" target to limit emissions which essentially mandates that emissions should be minimised by a certain amount – this however is not legally binding (Centre for Climate and Energy Solutions, 2002).

negotiations (Wirth, 2015:5). In principal, these are highly abstract concepts whose precise meaning is open to negotiation. Nonetheless, these concepts set the bar for what a successful outcome should look like and thus, actions that appear to deviate away from these principles are quickly labelled as stalling the negotiating process. One such instance is the Convention's goal of stabilising and reducing the emission and concentration of greenhouse gases to "a level that would prevent dangerous anthropogenic interference with the climate system" (Wirth, 2015:5; UNFCCC, 1992; Momtaz, 1996:269). However, countries continue to dispute not only what these concepts mean, but also precisely what is meant by "dangerous interference". It is thus often alluded that this objective "should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner" (Wirth, 2015:5; UNFCCC, 1992). In summary, the UNFCCC did not contain legally-binding targets for greenhouse gas reductions but it did lay down a framework that enabled a negotiating process that could establish such targets and it required developed countries to set mechanisms to reduce their emissions (Percival, 2014:139).

The treaty thus puts in place a structure to enhance collaboration amongst countries in an initial step towards finding a global solution to climate change, it does not however contain "measurable and enforceable objectives and commitments" (Leggett, 2011:2). While the Convention recognises the responsibility of all parties, it nonetheless differentiates between their responsibilities and stipulates that Annex I countries should be committed to reducing their GHG emissions to 1990 levels by the year 2000 (Wirth, 2015:5 - 6; UNFCCC, 1992). With regard to these stipulations, two major controversies emerged within the negotiations (Wirth, 2015:6). Firstly, the insistence on the control of emissions within a procedurally-orientated instrument was viewed as inappropriate (Wirth, 2015:6). Secondly, the insistence on dividing countries into developed and developing nations with divergent responsibilities towards the mitigation of GHGs was similarly controversial (Wirth, 2015:6).

4.8.2 A Description of the United States' Position in the Early UNFCCC Negotiations and its Energy Policy: 1989 – 1992

The USA's energy policy has rested on a number of economic assumptions that guided policy decisions, and historically the US government had a limited role therein. Although its energy policy lacked coherence, nonetheless, the USA was able to attain a competitive advantage internationally by having access to a cheap supply of energy *in lieu* of higher capital and

labour costs (Parker *et al.*, 2011:1). Thereby, an international agreement that was to rely on enforceable emission targets would be incompatible with an energy policy that had historically relied on cheap fossil fuels (Brown, 2002:10742). Should such an agreement be binding on the United States it would have had severe impacts on its economy (Brown, 2002:10742). US leadership was instrumental in designing a treaty that would not undermine its relative gains by mandatory restrictions of fossil fuel consumption thereby raising the cost of energy, an important factor of its international competitiveness, and thereby power. Its position was articulated by President George H.W. Bush who claimed that, "Sometimes leadership is not going along with everybody else." (Bush (a), 1992). This quote in many ways captures the essence of the US approach towards global leadership which would be reflected by its position in the UNFCCC.

4.8.3 Structural Influences

In international negotiations, the relative gains problem is extensively acknowledged as a formidable obstruction to cooperation (Snidal, 1991:701). Because of the security implications of international anarchy, states have to be concerned with their relative gains since this has implications for the goals that individual states wish to attain as well as their security (Snidal, 1991:703). By the end of the Cold War, although it was still hegemonic in a unipolar distribution of power, the relative decline of the United States, and the ascent of competitors in the international system, made the USA more concerned with its relative gains (Mastanduno, 1993:252). With the potential implications of the negotiations for its economic competitiveness and thereby hegemony and security, the United States displayed a cautious position towards global climate change governance (Agrawala and Andresen, 1999:459). Although, at the outset of the Bush presidency, a no-regrets policy was endorsed, however by the time of the Noordwijk Ministerial Conference in November 1989, a rift became evident amongst developed countries, where the USA, alongside Japan and the Soviet Union, strongly opposed a European-inspired initiative for the establishment of quantified targets and timetables, a position which the USA would continuously endorse by articulating that rather than setting binding commitments, countries should rather put forward non-obligatory national strategies[100] to cope with domestic policies related to climate change (Agrawala and

[100] The European position promoted the establishment of quantitative targets towards domestic GHG levels through an emphasis on targets and timetables (Bodansky, 2001:29). The USA, USSR and Japan argued that such use of timetables and targets was too rigid and did not reflect individual national circumstances and that ultimately the incorporation of such measures would be more symbolic rather than practical (Bodansky,

Andresen, 1999:460; Bodansky, 2001:28; Bodansky, 2011:700). The rift between the United States and other industrialised countries would only deepen with the subsequent Bergen Conference in 1990 and the Second World Climate Conference (SWCC) wherein the United States obstructed the adoption of targets and timetables and continued to promote the use of national strategies (Bodansky, 2001:29). At the Intergovernmental Negotiating Committee (INC) negotiations that took place in Chantilly, USA in February 1991, the USA would not accept a quantified target over concerns over the economic costs associated with such an approach and the associated implications for its hegemonic position in an anarchic system, much to the chagrin of Japan and European countries (Paterson, 1996:61).

An agreement that would be based on quantitative targets and timetables would disadvantage the USA internationally and provide its competitors with relative gains in an anarchic international system where states have to rely on self-help in order to survive. Such an agreement would have undermined the US hierarchic position and security in the international distribution of power. By emphasising the use of nationally determined and voluntary actions, the USA, through its position as a global hegemon, would have the means to pursue policies that would enhance its strategic latent power internationally and maintain its competitive advantage *vis-à-vis* its rivals, and thereby maintain its hegemony. Such emphasis on nationally determined and voluntary actions were endorsed since climate change mitigation would need to be integrated into US energy policy (Department of Energy, 1994:73). This was particularly challenging as in 1990, the United States' GHG emissions were 1618 metric tons carbon equivalent of which 83% emerged from the combustion of energy fuels (EIA, 1998:xii). Taking a cautious approach, initially, the Bush administration emphasised research for the phenomenon (Department of Energy, 1994:73). Even though the potential hazards of climate change were considered and preliminary action as part of federal activities was started, the Bush administration, much like its predecessor, cautioned against taking drastic action until there was more scientific evidence regarding the relationship between global warming and greenhouse gases (Department of Energy, 1994:73). The Bush administration argued that predictions of catastrophic climate change were drawn from limited data and did not warrant drastic policy action, particularly as a binding protocol would have major consequences for US energy policy which could lead to US hierarchic decline with consequences for US power and security in the international distribution of

2001:29). The US position laid emphasis on the development of domestic in contrast to international policies as well as the promotion of scientific research (Bodansky, 2001:29).

power and its hegemonic position therein (Lantis, 2005:399). Instead, emphasis was placed on least-cost policy measures that were implemented on a voluntary basis, and could be pursued for additional benefits, such as energy efficiency and pollution reduction, with the mitigation of climate change been a bonus thereof and with the competitiveness of the USA relative to its rivals not being undermined (Parker and Blodgett, 2008:7 – 9). Such activities could allow the United States to mitigate climate change without incurring serious harm to its economy, nor drastically altering its energy policy that was based on fossil fuels and least-cost policy options, and thereby maintain its hegemony and not giving its rivals a competitive advantage.

The goals of energy policy and climate change policy became increasingly incongruous as the tenure of the Bush administration progressed in spite of evidence that indicated that climate change mitigation could be achieved at little cost (Parker and Blodgett, 2008:1). While a number of important environmental acts[101] were endorsed during the first two years of the Bush administration in such key issues as reforestation, the advancement on the restrictions of gas and oil exploration off the US coast, the phase out of chlorofluorocarbons, and advancement of the Clean Air Act Amendments of 1990 yet, by the early 1990s, the Bush administration halted many of the earlier international environmental policies that they advocated, a trend which was evident in their position at the climate change negotiations as well as the Bush administration's decision to not sign the Convention on Biological Diversity at the Rio Earth Conference (Hahn, 1994:336; Thompson, 2005:308; Agrawala and Andresen, 1999:460). While Japan and European countries threatened to go ahead with the negotiations without US participation, in the end they managed to reach a consensus that allowed the treaty to mention dates while remaining ambiguous to not withstand claims of it being a binding commitment (Paterson, 1996:61). Because of its hegemonic position in the international distribution of power, the USA was able to secure its main goals within the UNFCCC, in spite of the opposition of other countries (Parker *et al.*, 2011:3).

Because of its hierarchic position in the international system being that of a hegemon, the United States played an instrumental role in the design of the architecture[102] of the UNFCCC and became a party to and adopted it in 1992 while the Senate ratified the Convention in

[101] George Bush Senior ran his 1988 presidential campaign to be the 'environmental President" (Bush (a), 1992).

[102] A number of US proposals made it into the final text such as the centrality of free markets and economic instruments that were included in the Rio Declaration and Agenda 21 (Bush (a), 1992).

October 1992 (Wirth, 2015:4; Percival, 2014:139; Selin and VanDeveer, 2011:121; Agrawala and Andresen, 1999:460). Nonetheless, within the Rio negotiations, the United States was criticised for its position and found itself isolated by developed and developing[103] nations (Bush (a), 1992). However, the USA was adamant that it was to assume a leadership role[104] in the negotiations, "In terms of Rio, as I said yesterday, we are the leaders; we're not the followers. And the fact that we don't go along with every single covenant, I don't think that means a relinquishment of leadership. I think we are, and I think the record shows we are, the leading environmental nation in the world. So I would just reject the premise or say, no, this doesn't concern me." (Bush (a), 1992). The USA therefore used its hegemony within the negotiations to reach an agreement that was not detrimental to its position in the distribution of power in the international system, nor give its competitors a relative advantage vis-à-vis itself. This re-iterates Grunding's (2006:798) study which indicated that there is less cooperation in the UNFCCC negotiations because of the consequences thereof for relative gains because the economic impact would have implications for the USA's security.

This is not surprising as at the structural level, with the Soviet Union no longer posing as a military threat, the focus became concentrated on a country's ability to compete economically, and thus due to the minimisation of military threats, policy-makers will focus increasingly on their states' economic and technological competence relative to other nations (Waltz, 1993:59 - 60). Such motivations are compelled as states are more concerned about relative gains in an anarchic and competitive system (Waltz, 1993:60). This would be

[103] While the USA's centrality was undisputed in the negotiations, already many developing countries that later became strong emerging economies were already playing a definitive role in the Rio negotiations (Depledge, 2005:21; Hurrell and Sengupta, 2012:467). The final outcome of the Rio negotiations presented a number of breakthroughs for these developing countries since, "the countries of the South managed to secure a good deal in 1992 when they were materially a good deal weaker. There was a rather striking acceptance by northern countries of not only aspirational declarations but also legal obligations" (Hurrell and Sengupta, 2012:467).

[104] While its position on a number of issues was more transparent and detailed in comparison to other countries, the position that the Bush administration advocated was nonetheless also interpreted as more antagonistic (Agrawala and Andresen, 1999:460). At the negotiations, controversy mainly arose because its position was characterised by the promotion of national strategies rather than quantified targets and timetables in spite of international as well as domestic pressure otherwise (Agrawala and Andresen, 1999:460 - 461). This negotiating position would pay off since the final text of the UNFCCC contained ambiguous terminology in relation to national actions to mitigate climate change (Agrawala and Andresen, 1999:461).

apparent in the United States' position in the UNFCCC under the Bush administration and their ability to cooperate therein.

While the USA was still hegemonic, the relative decline of the United States, alongside the rise of competitors in the international system, made the USA more worried about its relative gains as economic competition became more pronounced with the demise of the military threat posed by the Soviet Union. In order to maintain the competitiveness of the US economy, the use of non-obligatory national strategies instead of binding commitments were emphasised as these did not undermine the goals that historically characterised US energy policy nor increased the cost of energy to the US economy through mitigation action, especially in the context of the scientific uncertainty surrounding the issue at the time that the Bush administration alluded to; whereas the use of binding commitments, especially when developing countries were precluded from having such commitments, would have reduced the competitiveness of US industries *vis-à-vis* these developing countries (Parker *et al*., 2011:1, 3; Royden, 2002:419; Anderson, 1998:5; Senate Report 105-54 Appendix, 1997:10 - 11). As such, the USA could rely on its hegemonic position to oppose an agreement that would be based on quantitative targets and timetables which was perceived to weaken the USA internationally and provide its competitors with relative gains thereby undermining both US power and security.

The risk posed by the relative gains that would be gained by countries that do not have similar policies aimed at reducing GHG emissions, and that do not have legally binding mitigation targets, and the implications thereof for US competitiveness, has been central to the US debate on enacting policies related to climate change mitigation from the outset of the negotiations (Senate Report 105-54 Appendix, 1997:10; Leggett, 2011:1; Hovi, Sprintz and Bang, 2010:130), especially as "in a global context where currently some countries have legally binding policies to reduce greenhouse gas emission and other countries do not - i.e., differentiated global carbon policies - the potential exists that countries imposing carbon control policies will find themselves at a competitive disadvantage vis-à-vis countries without comparable policies. The risks accompanying establishment of carbon control policies, in the absence of similar policies among competing nations, have been central to debates on whether the United States should enact greenhouse gas legislation (Leggett, 2011:1). Specifically, concerns have been raised that if the United States adopts a carbon control policy, industries that must control their emissions or that find their feedstock or energy bills rising because of costs passed-through by suppliers may be less competitive and may lose

global market share (and jobs) to competitors in countries lacking comparable carbon policies." (Parker and Blodgett, 2008; Arnold, 2013:1). Through its hegemonic position the USA was able to support least-cost policy measures that were implemented on a voluntary basis thereby maintaining its power in the anarchic international system – a system which was characterised by the continuous competition between states for power and survival.

4.8.4 Domestic Influences

System-level incentives need to be interpreted through unit-level variables in order to make sense of foreign policy outcomes. Incidentally, the USA's ability to cooperate in and ratify the UNFCCC emerged from a bargaining process between the executive and legislative branches within the US federal system (Ikenberry *et al.*, 1988:6). Thereby, the Congressional input into the policy-making process forms an important internal constraint on the ability of the executive administration to respond to structural incentives and attain their goals (Mastanduno *et al.*, 1989:458 – 459). From the outset, the Senate gave its consent to the Convention's ratification and supported the Bush administration's endorsement of the UNFCCC due to the particular structure of the agreement at the time (Wirth, 2015:7). The United States was thus one of the earliest ratifiers of the UNFCCC in 1992 when it entered into force (Wirth, 2015:7). During the negotiations, the Republican Bush administration was against a binding convention to reduce greenhouse gas emissions (Lantis, 2005:399). The US Senate was particularly adamant that a climate change treaty would have negative consequences for the US economy and negatively affect economic sectors such as the energy sector, agriculture and manufacturing, setting the stage for subsequent senatorial opposition (Lantis, 2005:400). The obligation placed on developed countries to cover the costs related to mitigation in developing countries in various proposals was a particularly contentious issue (Lantis, 2005:399). At the unit-level, due to the structure of the US political system, taking drastic policy action to solve a potentially non-existent problem through the adoption of a binding agreement by Parties would have had serious consequences for US energy policy and as a result the Bush administration was pressed by various domestic coalitions from petroleum companies and utilities and Congressional dissent to either block, or dilute, an international agreement that could have such wide-ranging consequences for US energy policy (Lantis, 2005:399). Per consequence, the Bush administration would not support an agreement that would have drastic measures to mitigate carbon dioxide thereby weakening the treaty that was to be negotiated at the 1992 Rio Earth Summit (Department of Energy, 1994:74).

In relation to US energy policy, there are a number of ways to understand this outcome at the unit-level. Initially, in an influential study carried out by the National Academy of Sciences (NAS), titled *Policy Implications of Greenhouse Warming*, indicated that climate change could be reduced by least-cost measures (Parker and Blodgett, 2008:1). Since the cost of energy was an important consideration in the policy design process, in spite of estimates that US GHG emissions could be reduced at low cost, concerns for the competitiveness and strength of the US economy, compelled Congress to oppose any form of binding targets. The Bush administration's inability to design effective mitigation measures can also be understood from the incoherent structure of US energy policy. The EPACT of 1992 was designed in reaction to the Iraqi invasion of Kuwait, thereby placing emphasis on energy security, and as a secondary response to the UNFCCC. At the time there was an incongruence between policy goals leading to trade-offs. Since the necessity of Congressional input was necessary due to the federal structure of the US system, this policy had to rely on a least-cost strategy to minimise US emissions, the Bush administration had to endorse voluntary actions so that it could pursue its objectives without Congressional input (Parker and Blodgett, 2008:3). Thus, the policy endorsed least-cost options which principally consisted of fossil fuels, petroleum in particular, and by the same logic minimised the emphasis on renewable energy. While a least-cost strategy was endorsed, the Bush administration was urged by Congress to water-down the agreement to ascertain that it would not have negative consequences for the US economy and the competitiveness of its industries. Thus, although policy-makers within the Bush administration had the perception that economic growth and environmental protection were compatible to an extent, due to the particular implications of mitigation for the cost of US energy at the time, these consequences for the cost of energy and by extent the US economy would undermine these early attempts by the USA to support the UNFCCC and accept its obligations. Instead, research and a least-cost energy policy were endorsed in the Energy Policy Act of 1992 to reduce US emissions (Parker et al., 2011:1, 4).

Subsequently, President Bush expressed during ratification hearings that should there be an amendment or protocol to the UNFCCC which would stipulate binding GHG emission targets these would be submitted to the Senate for its advice and consent (Barbour, 2010). Thereby, in spite of the ratification of the UNFCCC by the Senate, the USA remained the only industrialised nation not to offer quantified targets for the mitigation of its GHGs in the 1992 UNFCCC treaty consistent with its hegemonic position which allowed it more latitude to enforce a position that would not undermine its relative gains nor hierarchic position. Within

the structure of the USA's domestic system Congressional fear that environmental regulation, and climate change mitigation in particular, would have negative consequences for the US economy and its international competitiveness, limited the ability of the executive to cooperate and ratify a particular kind of agreement (Depledge, 2005:14). Instead, the USA adopted a "non-binding target of containing emission levels at 1990 rates by the year 2000" under the UNFCCC (Senate Report 105-54, 1997:1). Nevertheless, by ratifying the Convention, the United States accepted certain obligations to meet the goal of mitigating global climate change (Leggett, 2011: 2).

4.9 Linking the USA's Energy Policy and Position within the UNFCCC

Mastanduno *et al.*, (1989:459) indicate that "...international anarchy and the pursuit of power are central to understanding both domestic and international politics." During the Republican Bush administration, (1989 – 1993) three important events occurred which would impact its domestic and foreign policies, the end of the Cold War, the Iraqi invasion of Kuwait, and the establishment of the UNFCCC whose objective is the "… stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." (UNFCCC, 1992:4). Importantly, the international system changed from a bipolar to a unipolar[105] distribution of power during the George H.W. Bush administration. As the sole superpower in a unipolar system after the end of the Cold War, the preponderance of the Eisenhower, Truman, and Carter Doctrines would allow the Bush administration to lead a multilateral coalition, which included the Soviet Union, to restore access to Middle Eastern petroleum after the Iraqi invasion of Kuwait. Although the USA was a hegemonic power in a unipolar system, the emergence of new transnational problems after the Cold War required more complex solutions[106] and trade-offs which could

[105] The reader should be aware of the debate amongst scholars as to whether the international system changed to a unipolar or a multipolar system after the end of the Cold War (Gaiser and Kovacˇ, 2012:49 – 53). This thesis however adopts the view that the international system changed to a unipolar system after the end of the Cold War (see Brooks and Wohlforth, 2015/16).

[106] It is ironic that while there has been growth in the policy instruments and databases available to policy-makers that assist in streamlining the decision-making process, climate change presents a super wicked problem that poses unique challenges to policy-makers whose moral, political, ecological and economic consequences present trade-offs which evade simplistic solutions and processes in spite of the corresponding growth in knowledge (Rabe, 2010: 3 – 4; OECD, 2017: 10; Lazarus, 2009). As such, the contradictions and uncertainties surrounding policy goals and instruments that policy-makers are required to make sense of can be assisted only to a degree by cost-benefit analysis and other policy analysis tools (Bollen *et al*, 2009:6).

not be solved by military means. Even though it was non-mandatory, the UNFCCC did emerge as an important driver for US energy policy as US policy-makers began grappling with the potential implications and synthesis between these divergent policy areas and related goals in the post-Cold War context. Yet, energy security continued to be emphasised in spite of Soviet decline and the successful operation against Iraq because of its centrality for the US economy, the basis for its power and security, in an anarchic international system and its hegemonic position therein. Policy-makers within this administration were broadly supportive of the assumptions that guided US energy policy for over a century by emphasising a restricted role for federal government and market operations. Concern for the US hierarchic position in the international system continued the concern with energy security and international competitiveness, and thereby not raising the costs of energy in the USA as this would undermine its hegemonic position. Petroleum continued to be of significance for US energy policy and its role within the international system which were vital aspects of its hegemonic position and role. These formed important domestic and international constraints towards the USA's ability to cooperate in the UNFCCC and design an energy policy that was simultaneously compatible with the goal of the UNFCCC and its international and domestic objectives.

At the structural level, the change from a bipolar to a unipolar distribution of power altered the ways in which states provided for their security. US energy policy, which was principally designed in response to the Iraqi invasion of Kuwait, and as a secondary response to the UNFCCC, would reflect this alteration as there was a minimisation of military activities while providing greater allowance for environmental regulation. However, US energy policy still reflected the tension between environmental regulation and economic growth as the USA responded to the necessity of enhancing its security through self-help as well as the need to maintain its hegemonic position in the international distribution of power. With the demise of the bipolar order and its military competition, economic competition became an essential component of interstate competition within the unipolar distribution of power. However, US dependence on foreign petroleum continued to increase, which would have implications for US energy security and power in the international distribution of power, especially in the aftermath of the Iraqi invasion of Kuwait which had consequences for the price of energy. Within this new context, to meet its objectives, the Bush administration supported a reliance on market mechanisms for the effective allocation of resources to enhance economic growth, and developed the National Energy Strategy of 1991 to ensure US energy security in the

midst of the USA's dependence on petroleum imports and the potential consequences for the US economy within the anarchic international system (Joskow, 2001:8). This dual approach must be understood within the historical development of the USA's energy policy which had a reliance on the free market (Boskin, 1993:27) while at the same time adhering to the necessity of enhancing the USA's economic growth and strength which were crucial aspects of the USA's security and hegemonic position within an international context where economic competition had become prime. However, increased environmental awareness restricted certain policy options and had to be carefully assessed against increasing costs to US energy so as not to undermine US competitiveness relative to its rivals, and thereby its hegemonic position.

At the unit-level, US energy policy reflected the bargaining process between the executive and Congress with significant alterations been evident between the Energy Strategy of 1991 and the final Energy Policy Act of 1992, with the latter energy policy, written in a time of crisis, being based on political compromise due to the incursion of vested interests; and due to the necessity of Congressional input a number of environmental and energy issues were left out of the subsequent energy policy that was developed (Rossi, 1995:196 – 197). The result of this bargaining process was that the Energy Policy Act of 1992 would also be characterised by incoherence since policy-makers were unable to reach consensus on a number of policy issues (Rossi, 1995:197). Moreover, any policy measures that were considered to increase the price of energy were rejected which contributed to the incoherence of the policy. Thereby, Congressional input limited the Bush administration's ability to pursue a comprehensive policy. While the perception of policy-makers within the Bush administration emphasised the compatibility between the policy goals of energy security, low cost energy and environmental regulation, these were pursued through a limited role for government and free market operations and competition, unlike the energy policies of the 1970s. Although the Bush administration was less ideologically predisposed in comparison to the Reagan administration and attempted to synthesise economic growth with environmental protection since policy-makers within this administration had the perception that these two goals could be compatible, environmental regulation was endorsed to the extent that it did not raises the costs of US energy. At the federal level, the division between the Bush administration and Congress related to the design of US energy policy and the potential costs thereof led to inconsistencies in US energy policy with the incomprehensive policy design having implications for its position in the UNFCCC.

From a structural perspective, in the aftermath of the collapse of the Soviet Union, the United States occupied the position of a global hegemon in a unipolar international system (Falkner, 2005:585). The USA's position in the negotiations that led up to and established the UNFCCC under the Republican Bush administration during the 1989 to 1993 period reflected both executive and Congressional concerns surrounding cheating and the relative gains that would be gained by US competitors in the international system. With the decline of the bipolar order dominated by a forty year concern over security competition with the Soviet Union, there were increased concerns about the USA's ability to compete economically in the international system in relation to Europe, Japan and increasingly, emerging economies, as these were the main rivals to its hegemonic position, and thereby power and security. Because of the security implications of the anarchic structure of the international system, states have to be aware of relative gains because of the consequences thereof for the pursuit of their goals and security. The administration's reluctance to adopt mandatory actions to reduce the USA's emissions reflected its concerns over the costs of such measures to the US economy in relation to these countries. Even though certain studies indicated that the costs of mitigation could potentially be low, the agreement would still need to be watered-down in order for it to be accepted in the US federal political context. Hence, while the USA emphasised its leadership within the UNFCCC and relied on its hegemonic position for the UNFCCC's design, such a design would reflect the need to maintain US power and security in the international system while minimising relative gains for its competitors.

Since US energy policy had been based on low energy costs and the minimisation of environmental standards which gave the USA a competitive advantage in the international system, policy-makers were reluctant to re-design an energy policy that was seen as integral to US power and security in the international system. This must be understood within the context of the USA's hegemonic position and its relative decline in the midst of the ascent of competitors in the international system which would compel the USA to have a cautious approach towards the UNFCCC and emphasising that non-obligatory national strategies rather than legally-binding commitments be endorsed therein since there were fears that US industries would be disadvantaged by the adoption of legally-binding mitigation targets, especially if developing countries did not have similar obligations (Senate Report 105-54 Appendix, 1997:10 - 11). With the demise of the Soviet Union, economic competition between states would be emphasised, policy-makers had to focus predominantly on economic growth in relation to other countries. Therewith, the USA would not accept legally-binding

quantified targets because of the economic costs associated therewith, while developing countries were exempt from these targets, which would have disadvantaged the USA in the anarchic international system while providing its competitors with relative gains (Senate Report 105-54 Appendix, 1997:10 - 11). The resultant UNFCCC agreement was supported by the Bush administration and Congress since:

> "First, the ratification of the UNFCCC was based at least partially on the premise that significant reductions could be achieved at little or no cost. This assumption helped to reduce concern some had that the treaty could have deleterious effects on U.S. competitiveness. Further ameliorating this concern, compliance with the treaty was voluntary. But the assumption has never lacked critics; and their views - and to some extent, experience based on alternative energy costs - have rendered the "low cost" assumption tenuous in the eyes of many." (Parker *et al.*, 2011).

With the demise of the bipolar distribution of power and its military competition, the perception of policy-makers within the Bush administration would enable greater support for environmental regulation, in the midst of the continuing emphasis on the goals of energy security and low cost energy, however this environmental regulation would be promoted only to an extent. In this particular historical context, the Bush administration is an interesting example since as a Republican administration, it was more supportive of environmental regulation unlike its predecessor, yet the emphasis on low cost energy impeded this policy goal in particular in regards to the UNFCCC.

Moreover, at the federal level, due to Congressional input, US energy policy had to be altered leading to policy incoherence since it excluded two measures that were necessary for the reduction of petroleum imports, these being greater auto efficiency standards and enhanced petroleum exploration in Alaska (Miller 1995). Therefore, the two levels of analysis interacted in a complex manner during this era. On the one hand, the change to a unipolar distribution of power led to less emphasis on military activities, thus allowing the Bush administration to support environmental regulation by prioritising it as a policy goal (Department of Energy, 1994:66), yet, on the other hand economic competition would be more prominent within this new distribution of power. At the unit level, federal level politics impeded the design of a coherent energy policy capable of placing emphasis on environmental regulation. Since energy policy creates an enabling environment, the costs that

would be distributed to consumers and industries was the main concern. In this regard, since the UNFCCC would raise the costs of US energy it would structurally disadvantage the USA's hegemonic position. At the time, the EPACT of 1992 could consist of a number of policy goals, a "no regrets policy" that could meet the objective of the UNFCCC at little cost to the USA. Nonetheless, in this era, there began to emerge disagreement over policy goals and the resulting costs to US industries and its economy. Fundamentally, no real alterations were developed and US energy policy largely reflected the framework developed by the Reagan and pre-1973 administrations.

Thereby, within the federal structure of the US political system, under pressure from Congress, the Bush administration watered-down the design of the UNFCCC due to the unacceptable costs it would distribute both within the USA's domestic context but also internationally. Since the USA was the world's most powerful state it could achieve this because of its relative power position and thus design the UNFCCC on the basis of its national interests. Such measures were meant to enhance US power and security, while giving it a relative advantage and minimising the propensity to cheat by other countries.

At the federal level, Congress stipulated that no international agreement should increase the cost of energy to US consumers and industries. In the US domestic context, the USA's ability to ratify the UNFCCC was based on a bargaining process between the executive and Congress. Congressional input thus formed an important internal constraint on the USA's ability to cooperate in the UNFCCC. The federal structure of the US political system, along with Congressional concern over the costs that could be incurred to US energy prices, facilitated Congressional ability to limit US cooperation in an agreement that could significantly re-design US energy policy. Therefore, at the federal level, the broad contours of energy policy were developed alongside the development of an agreement based on voluntary measures which would not undermine the competitiveness of US industries (Parker et al., 2011:3). This can be further linked to the distribution of power in the international system as this was ultimately instrumental in limiting US cooperation in the UNFCCC due to the threats that the outcome could pose to the US hegemonic position therein by increasing the costs of US energy, thereby undermining the USA relative to its competitors. Per consequence, no agreement could be enacted that significantly re-designed US energy policy and raised the costs to US consumers and industries, which are instrumental for US economic strength and thereby hegemony.

The UNFCCC and US energy policy during the Bush administration reflected an interesting interaction between the structural- and unit-levels. The costs related to US energy were important considerations at both the unit- and structural-levels since this was imperative for the competitiveness of US industries internationally. Any enhancement of energy costs would have serious implications for the USA's hegemonic position and security within the distribution of power. Thus, maintaining the USA's hegemonic position relative to its rivals was essential, while not providing its competitors with relative gains which influenced the debate surrounding US energy policy and its position in the UNFCCC. However, at the federal level the interplay between the executive and Congress towards US energy policy resulted in an incoherent approach towards the design of US energy policy in an attempt to maintain these low costs and minimised support for the UNFCCC and environmental regulation. While the Bush administration may have been less ideologically driven in comparison to its predecessor, it could only support environmental regulation in US energy policy and the UNFCCC to the extent that costs to US energy did not increase. The federal structure of the US political system influenced its cooperation in the UNFCCC at the unit-level since the resultant treaty could be accepted in the US domestic setting under the conditions that the treaty would not increase US energy costs and that the treaty was voluntary and legally non-binding (Parker *et al.*, 2011). Nevertheless, there was a continued criticism that costs to US energy could increase under the treaty, a theme that would be evident for subsequent administrations (Parker *et al.*, 2011).

4.10 Conclusion

This chapter has discussed the development of US energy policy and the role the USA played in the establishment of the UNFCCC at the 1992 Rio Earth Conference under the Bush administration. Crucially, the development of US energy policy cannot be understood in isolation from its hegemonic position in the anarchic international system and the influence of the policies of previous administrations that incurred a range of conflicting objectives that would need to be resolved. It has shown how in spite of claims that the USA could achieve low-cost mitigation targets, integrating mitigation measures into US energy policy was a controversial option receiving opposition from Congress at the unit-level. The Bush administration thus had to rely on low-cost and voluntary actions where climate change mitigation could be achieved as a by-product of achieving other policy goals in order to by-pass Senatorial opposition while maintaining the USA's hegemonic position and not giving other states' relative gains. Per consequence, attempts to integrate US energy and climate

change policies became an incoherent approach. Since the late 1980s, climate change and the UNFCCC would emerge as a new set of challenges that would have to be reconciled with conflicting policy objectives such as energy security and economic growth within the USA's energy policy. With the structural decline of the Soviet Union changing the international system from a bipolar to a unipolar system, traditional security concerns would give centre stage to economic concerns in order to maintain the USA's hegemonic position as it competed with its rivals in the anarchic international system. Within the US domestic configuration, Article II, Section 2, Clause 2 of the Constitution leads to a power play between Congress and the executive. With multiple actors and agencies involved at multiple levels, it is the constitutional separation of powers between these branches of government that have had a prominent influence on what can be pragmatically achieved. The historical record indicates that US hegemony was essential in the creation of the UNFCCC, and likewise the USA used its hegemony to undermine the UNFCCC when it did not suit its national interests. However, with the introduction of a new administration, a more ambitious approach towards climate change was pursued but more opposition was also incurred. Designing a policy that could respond to conflicting pressures and consisted of conflicting objectives at both the domestic and international levels became increasingly challenging.

Chapter 5

The Clinton Administration 1993 – 2001:

The Achilles Heel of the Economy

5.1 Introduction

The Clinton administration was marked by its attempt to link energy, climate change and economic issues within its energy policy. Therewith, the energy policy that this administration attempted to introduce was meant to merge a number of goals that historically were perceived to be in conflict with one another, namely economic growth and environmental protection. Hence, this administration introduced the Climate Change Action Plan (CCAP) in 1993, and a British Thermal Unit (BTU) tax on the heat content of the fuel to meet the goal of economic growth, but also to meet the objective of reducing US emissions by the year 2000 at 1990 levels. Although philosophically, the Clinton administration did not distinguish itself tremendously from the previous Bush administration, it was the emphasis on reconciling economic growth with environmental protection, while cooperating within the UNFCCC and its allies, that set it apart.

Such attempts would soon be quenched when Congressional opposition would limit the Clinton administration's ability to reach their goals. The exuberant effect produced by the end of the Cold War soon subsided with the emergence of a set of multi-faceted issues in an era when economic competition would become integral for power and security in the international system. Nonetheless, the Clinton administration pursued a set of quantified, legally-binding mitigation targets in the UNFCCC. It was thus an integral player in the negotiations that led to the establishment of the Kyoto Protocol. However, the passing of the Byrd-Hagel Resolution in 1997 effectively limited this administration's ability to cooperate in the UNFCCC. Congressional reasons for the opposition to the Kyoto Protocol was its exemption of developing countries from accepting mandatory mitigation targets, and the harm that such an agreement would inflict on the US economy. The concerns about the costs to US energy policy influenced the US position towards policy goals, and ultimately, cooperation within the UNFCCC.

This chapter outlines the development of US energy policy under the Clinton administration, followed by a discussion of how this development would interact with executive and Congressional politics towards the UNFCCC and cooperation therein. Specific attention will

be paid to the negotiations that led to the establishment of the Kyoto Protocol, and domestic and international constraints that resulted in the eventual inability of the Clinton administration to cooperate therein.

5.2 The Clinton Administration's Energy Policy

The Democratic Clinton administration (1993 – 2001) would attempt to distinguish itself from the previous Bush administration in regards to both its foreign and energy policy. It focused on multilateralism to achieve its international goals and adopted a hard law approach towards the climate change regime, while it attempted to link energy policy to other policy issues in order to strengthen the US economy – the engine of US power in the international system. Since great power status depends on economic capability, states need to consider which policy options will help them design a policy that can meet such a goal and how to manage the trade-offs and contradictions involved in such a design (Waltz, 1993:50). In an interstate system, economic competition can be just as intense as military competition (Waltz, 1993:59). With altering circumstances, policy-makers have to reconsider their options for self-help and there is no one formula regarding the composition of this self-help, nor how to attain power and security (Waltz, 1993:63). The end of the bipolar order served to introduce important new alterations in the international distribution of power. The accelerated economic growth of China and India, as well as other developing countries, increased their political influence. Structurally, these countries began to emerge as important players *vis-à-vis* the USA and placed pressure on the USA's role in the international system. To deal with the new trends in both international and energy systems, the Clinton administration relied on *The Climate Change Action Plan* (CCAP) released in 1993, and a new policy tool, a BTU tax on the heat content of the fuel.

By the 1990s, many of the policies that were enacted in the 1970s and early 1980s began to reap dividends and the 1990s were thus a period of limited policy activities (Joskow, 2001:3; Minsk, 2017:4). This era was characterised by stable energy markets with stable and decreasing energy prices, as well as abundant supplies (Joskow, 2001:1; Minsk, 2017:4). Per consequence, there was little investment in new production sites and energy infrastructure (Westphal, 2006). In spite of market stability, at this point, the USA's energy dependence was higher compared to 1974 (Department of Energy, 1994:79; Miller, 1995). Despite the relative stability, a number of important transformations began to occur in energy systems which were to have important implications for later administrations and their energy policies.

Concern over the adverse effects of climate change increased in the early 1990s which required international coordination to mitigate it. The reports released by the Intergovernmental Panel on Climate Change (IPCC) since 1990 provided strong evidence for the phenomenon of global climate change which was linked to human induced activities of which energy is one of the most prominent (Kanellakis *et al.* 2013:1020). Climate change was thus seen as a constraining factor on energy use. Increasingly, the UNFCCC negotiations had to be considered when designing energy policies because of the implications that energy production and use had for the mitigation of climate change.

The oil crisis of the 1970s occurred in conjunction with increasing concern over environmental problems which led to the promotion of renewable energy to address these challenges (Yergin, 2012:13). Although there was much support for these technologies during the 1970s, during the 1980s, the decreasing price of petroleum and challenges related to the economic deployment of renewables decreased their political and economic support (Yergin, 2012:13). With stable energy prices and secure supplies in the 1990s, renewable energy technologies were further marginalised (Yergin, 2012:13). These trends in both international and energy systems created the context in which the Clinton administration found itself, and would impact the administration's choice of policy goals and instruments. While this administration reacted to the perceived incentives of the international system, and attempted to implement a novel approach to energy, climate change and economic issues, Congressional politics would undermine these policy attempts, resulting in an incoherent policy approach.

5.2.1 Structural Influences

The policy goals of the Clinton administration can be traced to the exuberance of the end of the Cold War, wherein the United States was the sole superpower in a unipolar system, and "economically, the United States is the world's most important country, militarily it is the decisive one." (Waltz, 2000:53). Such conditions were further augmented as the USA experienced enhanced economic well-being and security in the aftermath of the Cold War (White House, s.a.; Waltz, 2000; Waltz, 1999:699). Unlike the previous Reagan and Bush administrations, the Clinton administration was characterised by a different approach towards energy policy and environmental regulation therein. Policy-makers within this administration would attempt to advance policy goals and instruments within its energy policy based on the assumption that these could achieve the goals of economic growth, environmental protection

and energy independence simultaneously and at a reduced cost of such abatement actions. Nonetheless, because of the effects of anarchy, decision-makers must continuously be concerned with their state's security in a self-help system, and thereby energy would become a crucial aspect of economic policy under the Clinton administration since energy is a security issue in an anarchic international system (Williamson, 1994:115). Moreover, since inexpensive energy was a core component of US competitiveness and the augmentation of its hegemony in the distribution of power, emphasis had to be placed on the link between US energy policy and its economic well-being, especially in relation to its competitors. Per consequence, the Clinton administration attempted to link energy policy to other issues which included economic growth and the environment (Miller, 1995:721, 722; Williamson, 1994:115). Under these circumstances, President Clinton, in the first press conference that he held after been elected president, asserted that energy would play an instrumental role in stimulating the economy and job creation (Department of Energy, 1994:77; Williamson, 1994:115). With the demise of the Cold War and its bipolar structure, economic competition, rather than military competition, would become a pivotal strategy for US security and power for the enhancement of its hegemony even though the international system was unipolar. Thereby, under the Clinton administration, the economy was a top policy priority and energy was viewed as a vital input therein to enhance its hegemonic position within the distribution of power in relation to its competitors (Department of Energy, 1994:77; Williamson, 1994:115). To enhance its hegemonic position, the country's energy policy was therefore required to attain three objectives: strategic security, economic vitality and environmental quality (Department of Energy, 1994:77; Joskow, 2003:52). The Clinton administration was compelled to pursue these policy goals within its energy policy of linking economic competitiveness and environmental protection as German and Japanese manufacturers had greater energy efficiency which allowed them to have lower production costs thus giving them an advantage within the distribution of power over the United States of America and thereby threatening its hegemonic position (Schneider, 1992).

In this regard, the United States' energy dependence and its trade deficit caused by payments towards energy imports as well as the role that its energy policy played in deteriorating this situation, and thereby its position in relation to its competitors, was a concern for the Clinton administration since it undermined its power and security and caused it to be dependent on states' that were hostile to its interests (Department of Energy, 1994:78; Schneider, 1992; Joskow, 2002:521). To improve this situation, the Clinton administration emphasised energy

efficiency, increased production and consumption of natural gas, the development of alternative energy sources, and "making good energy policy and good environmental policy good economic policy for America" (Department of Energy, 1994:78; Miller, 1995; Joskow, 2002:521). As such, it was emphasised that economic recovery, environmental protection and job creation depended on the type of energy policy that was to be designed (Department of Energy, 1994:79; Schneider, 1992; Miller, 1995). Since power and wealth are inextricable, they were necessary for the survival of the USA in the anarchic international system and the enhancement of its hegemonic position in relation to its rivals (Mastanduno *et al.*, 1989:462), and the Clinton administration had to try to find ways to merge economic and environmental goals in US energy policy under new circumstances, two goals that were historically perceived to be in conflict with one another. As part of this administration's economic recovery plan, energy would be central for the economic stimulus package, deficit reduction programme, and long-term investment projects (Department of Energy, 1994:80; Graetz, 1993:567-568). However, since energy industries and the fossil fuels they supply were viewed as the long-term foundation of US power and economic prosperity and thereby maintained the USA's hegemonic position, any attempts to steer away from these would be undermined since "Power, as Realists remind us, is a currency with which to purchase security and other valued political goods. Wealth…is a necessary means to power and the two are in long-term harmony." (Mastanduno *et al.*, 1989:462). Thus, while the United States maintained its hegemonic position in the international system, the Clinton administration was concerned with the promotion of an energy policy that could be congruent with both economic and environmental goals in order to gain a competitive advantage in relation to its competitors thereby enhancing US power and security and not succumb to further hierarchic decline due to the increased costs of US energy. This led to this administration attempting to achieve congruence between economic growth and environmental protection within its energy policy so as to enhance US hegemony as well as security by enhancing its economic strength since the enhancement of power within the international system during this era depended on enhanced economic strength.

5.2.2 Domestic Influences

The Democratic Clinton administration released the Climate Change Action Plan (CCAP) in 1993 as part of its strategies to meet the objectives of the UNFCCC which relied on fifty two voluntary measures to reach this administration's emission goal and was intended to reduce the USA's GHG emissions to 1990 levels by 2000 (Miller, 1995:722; Cavanagh *et al.*,

2001:29; Leaf *et al.*, 2003:305). Curiously, these initiatives bore great resemblance to those that the Bush administration would have implemented and articulated preference for government-industry co-operation, a reliance on market incentives, limited government intervention and voluntary programmes (Cavanagh *et al.*, 2001:29). Even though the Clinton administration highlighted climate change as a key policy priority, substantively there was little departure from the Bush administration's policy framework (Cavanagh *et al.*, 2001:29). Although the CCAP did not include new measures and instead promoted voluntary programmes, under the Clinton administration, the environment was directly mainstreamed into energy policy decisions due to this administration's policy-makers' perception that the goals of environmental regulation and economic growth were compatible and could be used to enhance the US economy (Miller, 1995:723; Department of Energy, 1994:84). Thus, climate change became a major issue and policy priority for the Clinton administration which affected its energy policy goals (Department of Energy, 1994:84; Minsk, 2017:4). However, as a continuation of the policy framework started by previous administrations, the Clinton administration, while accommodating environmental goals, supported the free market and "viewed the proper role of energy policy to respond to market imperfections, especially as they related to the environmental impacts of energy production and consumption" (Joskow, 2001:4).

At the federal level, in spite of the USA's hegemonic position and favourable economic conditions, implementing the administration's preferred policies would meet strong resistance in the US Congress because of the potential negative consequences that environmental regulation could bear for the US economy. To accomplish the administration's goals of combined economic recovery and environmental protection, which were perceived to be compatible by policy-makers within this administration, on the seventeenth of February 1993, a BTU tax on the heat content of the fuel was supported as the main policy tool to increase revenue, but also in order to reduce pollution and the trade deficit, and enhance energy independence and efficiency which would reflect an attempt to integrate Clinton's campaign mandate to reduce the deficit alongside vice-President Al Gore's environmental priorities (Department of Energy, 1994:80; Agrawala and Andresen, 1999:461; Downie, 2013:27; Skodvin and Andresen, 2009; Royden, 2002:419). It was hoped that the BTU tax would help the USA to achieve its commitments under the 1992 Rio Earth Summit as well as generate $72 billion in revenue over the span of the subsequent five years and reduce the federal deficit (Department of Energy, 1994:81). However, vested interests as well as Democrats and

Republicans in Congress strongly opposed the tool even though it did contain adjustments that would have protected energy-intensive industries - which at that point served as a turning point in the domestic politics of climate change (Department of Energy, 1994:82; Miller, 1995:721; Downie, 2013:27 – 28; Brown, 2002:10753). In 1993, Congress made it very evident that it would not support any programme that aimed to limit the USA's GHG emissions (Brown, 2002: 10749; Hilzenrath, 1993; Royden, 2002:420). Such measures to reduce emissions were viewed as being harmful to the Democratic Party's supporters in the labour sector while the Republican Party was antagonistic because of the opposition stemming from the corporate sector (Brown, 2002: 10753).

At the federal level, after Congress did not enact this legislation, the Clinton administration assumed a more modest position towards energy policy and complied with existing budgetary and regulatory constraints because of the structure of the US political system which effectively diffused executive power in relation to Congress (Joskow, 2001:2). Congress, which was dominated by the Republican Party, opposed the Clinton administration's attempt to increase fuel efficiency standards for vehicles and appliances and to implement tax incentives for renewable energy (Joskow, 2001:2). Nonetheless, in spite of this opposition, under the Clinton administration, the environment would attain mainstream status and environmentalists were a part of the executive branch under Clinton's presidency (Department of Energy, 1994:82). With well-functioning energy markets during the 1990s, energy policy became less urgent as there was less concern over the cost of energy (Joskow, 2001:4). Yet, in spite of these efforts, between 1990 and 1999, US GHG emissions would increase substantially because of economic growth, increased electricity consumption, and increased activities in the transportation sector which was responsible for 39% of total emissions – the largest of any sector - during this period (Brown, 2002:10750).

5.3 The Clinton Administration, the US Position in the UNFCCC Negotiations and US Energy Policy

Shortly after the historic Earth Summit of 1992, the Clinton administration came to power with a new set of ideas to deal with climate change and sought to distinguish itself from the previous Bush administration on this issue, as well as the restoration of the United States' international reputation through its engagement in multilateralism (Brown, 2002:10753; Downie, 2013:27). Thereby, the United States took a different foreign policy position towards the UNFCCC under the Clinton administration (Depledge, 2005:14; Downie,

2013:27). While the inclusion of quantified, legally-binding emission targets were a stalling point for the USA under the Bush administration, President Clinton declared in April 1994 that the USA would voluntarily reduce its emissions to 1990 levels by the year 2000 which was the goal set out by the UNFCCC and had federal agencies seek a plan to have this attained (Cavanagh *et al.*, 2001:29; Downie, 2013:27; Skodvin and Andresen, 2009). In a self-help system, how policy-makers implement policies and organise policy goals to attain power and security are ultimately at their discretion and depend on their assessment of the national interest and their country's particular circumstances and position internationally.

5.3.1 Structural Influences

The Clinton administration was willing to pursue cooperation within the UNFCCC, and placed emphasis on the importance of environmental regulation as a vital goal of its energy policy (Miller, 1995). However, there are two major issues that limit a state's ability to cooperate in international negotiations: the propensity to cheat and concerns about relative gains. The Clinton administration had to be aware of these issues in the negotiations that led to the establishment of the UNFCCC. An additional complicating factor was the exemption of developing countries from accepting legally-binding mitigation targets thereby giving them an advantage in the international system. This emerged as a major concern for the administration as they had to design an agreement that would not structurally disadvantage the United States in relation to its rivals in the international system (Berke, 1993). However, a dichotomy emerged in the Clinton administration's position towards climate change at this point. While, the President's main policy tool of a BTU tax on the heat content of the fuel was no longer an option, the goal of reducing emissions to 1990 levels by the year 2000 remained (Downie, 2013:28; Williamson, 1994:115; Agrawala and Adresen, 1999:461). At the domestic level, non-mandatory measures were promoted to achieve the goal of emissions stabilisation; however, at the international level, the Clinton administration continued to pursue a hard-law position towards the climate change regime unlike its predecessor, most notably through its endorsement of the Kyoto Protocol (Skodvin and Andresen, 2009; Agrawala and Adresen, 1999:462; 464).

The negotiations for the Kyoto Protocol[107] began in March 1995 at the first Conference of the Parties (COP 1) which was held in Berlin (Downie, 2013:26). The goal of the negotiations

[107] The UNFCCC is a legally non-binding agreement and does not impose quantified emission targets on countries. However, due to the historical responsibility and the objectives set by the UNFCCC, Parties

was to determine the commitments developed nations (Annex I Parties) were to adopt and how to determine their adequacy in terms of the objectives set out by the UNFCCC (Downie, 2013:26). Parties decided at the meeting to set quantified limitation targets, which would be the responsibility of developed countries to undertake due to their historical responsibility, which was justified by the notion of 'common but differentiated responsibilities' (Hovi *et al.*, 2010:5). At this point, Parties agreed that it was not expected of developing countries to cut their emissions (Hovi *et al.*, 2010:5).

The difficulty of pursuing cooperation towards the UNFCCC under the Clinton administration needs to be assessed within the constraints of the effects that mitigation actions would have on US energy markets, and by extension its economy and thereby hegemonic position, relative to other states. In 1996, US GHG emissions increased to 1 753 million metric tons carbon equivalent, most of which were from the combustion of fossil fuels, thus any attempted climate policy would have negative consequences for its energy sector and thereby hegemonic position relative to other states (EIA, 1998:xii; Miller, 1995:722 – 723). Since GHG emissions originating from energy-related activities were such a large percentage of the USA's total emissions, any policy measures and activities to reduce these emissions will have consequences for energy markets in the United States ranging from energy use and prices to the economy (EIA, 1998:xii). An increase in energy prices in the economy would result in Gross Domestic Product (GDP), output and employment losses (EIA, 1998:xxiv). The Climate Action Report of 1997 (CAR, 1997) articulated that,

> "The increasing role of international trade in the US economy has heightened concerns about the effects of emission-reduction policies on competitiveness. While most US trade is with other OECD countries, trade with the rapidly developing countries in Asia and Latin America is increasingly important. Thus, there is a concern that mandates to restrict greenhouse gas emissions in the United States could result in higher energy and other production costs, particularly relative to those of US trading partners in the developing world without similar mandates. Higher costs, to the extent not offset by efficiency gains, could cause some US industries to lose market share or to relocate production to those countries. Conversely, trade enables

recognised that it was necessary to set legally-binding, ambitious targets and that developed countries had to bear the responsibility for these targets.

> the United States to expand production for export in those high-productivity sectors in which the nation has comparative advantage."

Under such circumstances, what compelled the Clinton administration to pursue cooperation within the UNFCCC? Generally, there are two ways to understand the Clinton administration's supportive stance, and likewise, why such an approach could not be sufficient to achieve the necessary cooperation that was required for the USA to accept legally-binding mitigation targets. Broadly, the goals that this administration wished to pursue can be understood as an outcome of the end of the Cold War and its bipolar structure. With the US emerging as a hegemonic state in a unipolar system, the generated optimism limited the traditional objections to the pursuit of non-security goals. But, the anarchic structure of the international system cannot be ignored for long, and ultimately, the main goals that any state, including the USA, can pursue is that of security and power. Additionally, economic competition became an important aspect of international relations after the end of the Cold War (Waltz, 1993:59). As a means to maintain US power and security in the international system, the Clinton administration emphasised the goals of a reduced trade deficit, reduced pollution, as well as enhanced energy independence and efficiency, thereby attempting to merge energy, climate change and economic goals as a means to both enhance US power and security in the international system, while also meeting the goals of the UNFCCC by enhancing the competitiveness of US industries relative to its rivals (Hilzenrath, 1993; Miller, 1995; Minsk, 2017:4). However, attempts to synthesise these goals with others, while not improbable, is nonetheless a challenging task (Miller, 1995). Again, any increase to the cost of US energy would undermine the competitiveness of US industries and economy, with resultant negative consequences for its hegemonic position (Parker *et al*., 2011:7; Lippman, 1993; Hilzenrath, 1993). Due to the close association between US economic strength and hegemony, there would be opposition to any agreement that increased the costs of US energy and thereby impeded the USA's hegemony while strengthening its rivals *vis-à-vis* itself (Parker *et al*., 2011:7; Lippman, 1993; Hilzenrath, 1993).

Moreover, although the USA was a hegemonic state, it was also not the hyper-power of the immediate post-World War Two era, instead, structurally it was weaker, while other states, both developed, but increasingly developing states as well, were becoming stronger relative to itself (Milner and Snyder, 1988:749 - 750). Since inexpensive energy was a source of comparative advantage for the USA, mandatory policies that would increase its price were viewed as threatening the structural position of the USA, and its security (Parker *et al*.,

2011:7; Lippman, 1993; Hilzenrath, 1993). Such restrictions were further opposed by the propensity to cheat by developing states because of asymmetrical climate policies, and carbon leakage (Parker *et al*., 2011:7; Lippman, 1993; Hilzenrath, 1993). The structure of the international system thus largely accounted for the broad goals adopted by the Clinton administration, but likewise why it was difficult to ultimately achieve cooperation. While the structure of the international system played the dominant role in restricting US cooperation within the UNFCCC, the goals that were supported and the inability to cooperate, however, can further be traced to the structure of the US domestic system.

5.3.2 Domestic Influences

While the international system provides a set of incentives and constraints that decision-makers need to respond to, there is no standard approach as to how these will be interpreted; nor in how this response will be shaped. While Democratic the Clinton administration was willing to cooperate in the UNFCCC based on the distribution of power in the international system and its perception of the compatibility between economic growth and environmental regulation as a means to augment US power and security therein, Congress was not. After the 1994 elections, the emergence of a Republican dominated Congress led to a rift between the Senate and the executive in the US federal system towards the climate change regime away from the more progressive stance displayed by the Clinton administration (Depledge, 2005:15). The pressure placed on the Clinton administration by their domestic constituents, was used as a justification to interpret the UNFCCC from an agreement to reduce GHGs to a treaty that merely encourages advanced industrialised countries to freeze their emissions (Sprintz and Weiß, 2001:68).

The COP 1 negotiations proved to be a decisive milestone for the USA's domestic politics and its associated diplomatic effort (Depledge, 2005:15). During the 1995 negotiations, the Clinton administration adamantly supported converting the UNFCCC into a binding set of protocols (Lantis, 2005:399). During these negotiations, the US negotiating team came under pressure from industry lobby groups not to preclude developing countries from an agreement centred on legally-binding mitigation targets (Depledge, 2005:15). In spite of these lobbying efforts, the US delegation instead chose to support the position adopted amongst its allies towards the substantive nature of the agreement, and thus indicated its support for quantified mitigation targets and multilateralism (Depledge, 2005:15). This position was reiterated during the second Conference of the Parties (COP 2), when the USA once again declared its

willingness to support[108] legally-binding emission reduction targets in spite of lobbying efforts otherwise (Depledge, 2005:15; Cavanagh *et al.*, 2001:29 - 30). This last point drew considerable ire from lawmakers who argued that the USA, and their constituents specifically, were to experience severe negative economic effects if the USA was to cut its emissions while strong developing economies did not face similar requirements thereby causing structural decline relative to its competitors and negating relative gains for the USA within the negotiations which was based on the potential increased costs being accrued to the US economy should such environmental measures be endorsed (Hovi *et al.*, 2010:5). Unsurprisingly then, the Clinton administration's position in favour of accepting legally-binding mitigation targets at the Berlin Mandate stirred a great deal of ire within the Senate at the federal level (Hovi *et al.*, 2010:5). By circumventing dissent from domestic actors that opposed a quantified, legally-binding deal through its support for the Berlin Mandate, a coalition was able to be formed in Congress between Republicans and Democrats which later would stop the ratification of the Kyoto Protocol (Lantis, 2005:399).

In December 1997, the Kyoto Protocol was adopted at the Third Conference of the Parties (COP 3) (Downie, 2013:26). To achieve the objectives set out under the UNFCCC, the Kyoto Protocol established binding emission targets for all developed nations and formulated flexibility mechanisms, such as the trading of emissions, to enable countries to meet their targets (Downie, 2013:26). While the Kyoto Protocol articulates quantitative emission reduction targets for industrialised countries, it exempts developing countries from legally-binding and quantified emission targets (Wirth, 2015:7). Substantively, six greenhouse gases are mentioned in the Protocol, which are weighted in accordance to their "relative contributions to climate disruption as measured by 'carbon equivalents' based on global warming potentials established by the IPCC" (Wirth, 2015:7).

Under the Kyoto Protocol, Parties decided that the commitment period to have this achieved was to begin in 2008 and finish in 2012 (Wirth, 2015:7). Under the Kyoto Protocol, Annex I Parties were called to reduce their overall emissions by 6 to 8 percent by 2012 with 1990 as a baseline (Lantis, 2005:398). Under the Kyoto Protocol, the USA outlined that it would reduce its emissions by 7% below 1990 levels between 2008 and 2012, a position that provoked

[108] A notable area of support was for cost-effective measures and market-based instruments as important features of Clinton's climate change policy (Cavanagh *et al.*, 2001:31).

interagency tensions with regards to its practical achievement (Percival, 2014:140; Parenteau, 2004:368; Downie, 2013:31). The Kyoto Protocol has some unique features such as its use of flexibility mechanisms which included its cap-and-trade system to meet these targets (Wirth, 2015:7). This was created to minimise the costs of implementation by providing more flexible measures to countries to meet their obligations under the Protocol (Wirth, 2015:7).

Within this historical context, two interrelated pieces of legislation would also influence US climate and energy policy, these being the Clean Air Act (CAA) and the SO_2 cap-and-trade system[109], and it is worthwhile to briefly allude to their history to understand this policy context in the United States. With the increase in environmental activism of the preceding decade, the Clean Air Act, and the EPA, were established in 1970 by President Richard Nixon with bipartisan support and would become an important influence on environmental law in the USA (Schmalensee and Stavins, 2018: 1 - 2). The origins of the SO_2 cap-and-trade system can be traced to 1990 when the administration of George H.W. Bush introduced amendments to the CAA as a regulatory effort that was designed to reduce the emissions of sulphur dioxide (SO_2), mainly from electric power plants, in order to deal with acid rain which became a prominent environmental concern in the 1980s (Chan *et al*, 2012:1, 3). The SO_2 allowance-trading programme set a precedent as an extensive pollutant cap-and-trade system and was intended to minimise US SO_2 emissions by ten million tons per annum against a 1980 baseline (Chan *et al*, 2012: 3). In contrast to earlier, inflexible "command-and-control" pollution programmes, the SO_2 allowance-trading programme was flexible such that, "If annual emissions at a regulated facility exceeded the allowances allocated to that facility, the facility owner could either buy allowances or reduce emissions, whether by installing pollution controls, changing the mix of fuels used to operate the facility, or by scaling back operations. If emissions at a regulated facility were reduced below its allowance allocation, the facility owner could sell the extra allowances or bank them for future use; these opportunities created incentives to find ways to reduce emissions at the lowest cost" thereby providing companies with different methods with which to reduce their SO_2 emissions while also allowing those companies that had costly abatement expenditures to trade with those that

[109] The SO_2 allowance-trading programme would have an impact on the design of the Kyoto Protocol as well as early efforts by the Obama administration to mitigate climate change (Tietenberg *et al.*, n,d: 19 – 21; 7; Stavins and Schmalensee, 2012: 1 - 2).

had low abatement expenditures (Chan *et al*, 2012:4, 10). This was an effective programme that resulted in SO_2 emissions from electric power plants been reduced by 36 percent in the period between 1990 and 2004 (Chan *et al*, 2012:4). Moreover, the Clean Air Act of 1970 as well as the Clean Air Act Amendments of 1977 placed emphasis on the use of scrubbers to reduce SO_2 emissions from coal-fired power stations which was to have important implications for the coal industry and electric power plants (Chan *et al*, 2012:24; Williams, 1993).

Since the cap and trade system is theorised to be beneficial for dealing with climate change and as such has important implications for climate policy given that "The Programme's emissions cap and allowance trading approach has achieved a strict environmental goal at dramatically lower costs than traditional forms of regulation" in the United States, it has therefore being the centre of much political debate (Chan *et al*, 2012: 1 – 2; Tietenberg *et al.*, n,d: 27).

The Clinton administration, and especially vice-president Al Gore, played a pivotal role in the design of the Kyoto Protocol and its flexibility mechanisms, and the administration pushed for the inclusion of the flexibility mechanisms in the final agreement (Wirth, 2015:8; Percival, 2014:140). The US delegation promoted the use of the flexibility mechanisms in an attempt to reconcile the Clinton administration's progressive position with the more antagonistic position adopted by Congress (Depledge, 2005:16 – 17). The USA's preference for market-based mechanisms was met with some resistance from other states, particularly developing nations and the EU (Depledge, 2005:17). Yet in spite of opposition from other nations, the USA's preferences for flexible financial mechanisms was extensive in the final negotiating text of the Kyoto Protocol, and surpassed inputs from other countries which did not endorse the inclusion of flexibility mechanisms to the same degree as the United States (Depledge, 2005: 17; Rowlands, 2001:47).

The flexibility mechanisms consisted of a number of measures which have been designed to minimise the costs of implementation under the cap-and-trade system (Wirth, 2015:7). These mechanisms have been designed to increase the means available to states to meet their obligations under the Kyoto Protocol (Wirth, 2015:7). Under the protocol, states that have quantified emission reduction targets may trade the rights to emit amongst parties (Wirth, 2015:7). Under the Protocol, Annex I states are also able to partake in cooperative projects that limit emissions in other Annex I parties thus attaining credits for such endeavours, these

mechanisms are called the Joint Implementation (JI) (Wirth, 2015:7 - 8). Annex I Parties are also able to implement their emissions reduction obligations through the establishment of emission reduction projects in developing countries through the Clean Development Mechanism (CDM) (Wirth, 2015:7 - 8). In addition to the flexibility mechanisms, the United States also endorsed the six gases that the Convention and Protocol attempt to reduce, namely methane, hydroflourocarbons, carbon dioxide, nitrous oxide, sulphur hexafluoride and perlourocarbons (Rowlands, 2001:47). The European Union, in contrast, promoted the reduction of only three gases namely methane, nitrous oxide and carbon dioxide; however, it was the USA's selection which made it into the final text of the negotiating agreement (Rowlands, 2001:47). Such incidents assert the hegemonic status of the United States within the negotiations (Rowlands, 2001:47).

Within the federal structure of the US political system, in order to ratify the Kyoto Protocol, the President required a two-thirds majority in the US Senate, an attempt that was highly problematic since a rift was starting to form between the executive and legislative branches of government in reaction to system level constraints and incentives (Sprintz and Weiß, 2001:68; Downie, 2013:31). In the lead up to the COP 3 negotiations, the Republican-dominated US Senate strongly disapproved of the negotiating position adopted and made it clear that they were not being consulted during the progress of the negotiations (Depledge, 2005:15; Hovi *et al.*, 2010:5). This congressional resistance was driven by members of Congress and certain business interests who opposed the USA's acceptance of a legally-binding agreement, and attempted to quench the presidential ambition in Congress due to the heightened costs that would be incurred to the US economy and the benefits that would have been gained by rivals to the United States should the Kyoto Protocol have been adopted (Downie, 2013:30).

This opposition would increase and eventually, four months before negotiations for the Kyoto Protocol began, the passing of the Byrd-Hagel Resolution 95-0 in the US Senate signalled a shift in the US position on climate change (Downie, 2013:30; Agawala and Adresen, 1999:467). In essence, this Resolution stipulated that the USA should not be signatory to a protocol that would inflict harm to the US economy, and that would not include commitments for developing countries indicating that Congress was concerned about the harm such an agreement would have for the USA's relative gains, and potential for cheating in an anarchic system where developing countries' power was starting to increase (Downie, 2013:30; Agawala and Adresen, 1999:469). The passing of the Byrd-Hagel Resolution influenced the

USA's emissions' targets which now had to be reconciled to the stipulations laid out by the Berlin Mandate and the Byrd-Hagel Resolution (Downie, 2013:31). The Senate thus opposed any international ratification that would undermine US competitiveness and economic growth and that would impose emission restrictions on developed nations but exempt developing countries (Skodvin and Andresen, 2009; Lantis, 2005:400).

At the federal level, such opposition arose because of worries related to the wide-ranging distributional effects for the US economy had the USA ratified the Kyoto Protocol (Lantis, 2005:399). By having negative consequences for the US economy while creating a double-standard that would allow developing countries to continue emitting, critics gained a firm foot-hold in the Senate (Lantis, 2005:399). Congressional fears for the competitiveness of US industries and its economy were thus compounded by the asymmetrical design of the Kyoto Protocol which could undermine the relative position of the USA - potentially inducing structural decline - while augmenting strong developing countries' ability to cheat and attain relative gains that could further undermine the security of the USA. Although the voices of opposition were prolific, those who did support the ratification of the Kyoto Protocol pointed out that a transition to environmental modes of production would have benefits for the US economy over a long-time horizon (Lantis, 2005:399). In addition, the Clinton administration faced certain restrictions in terms of the policy actions that it could purse to attain their goals within the context of the US political system. Such actions had to operate on a voluntary basis as outlined in the CCAP, and in many ways did not depart from the type of policy instruments that would have been pursued by the Bush administration, while its pursuit of a BTU tax on the heat content of the fuel was opposed by Congress. Since the concern about the implications of policy actions for the cost of energy in the USA was paramount, attempting to design and implement effective policies is highly complex and difficult, often resulting in stalemate due to the differences regarding whether environmental protection and economic growth are compatible. Thereby, designing an energy policy that could be responsive to multiple and conflicting objectives has reduced the USA's ability to pursue a policy that could meet the objective of the UNFCCC, while the limited role for the US government, while arising from the historical development of its energy policy, and Congressional input, has further limited the effectiveness of the USA been able to have a coherent approach towards climate change mitigation, energy security and economic growth. Because of this Congressional opposition, the Clinton administration was unable to neither reach its goals nor implement a coherent energy policy.

Thus, even though policy-makers within the Clinton administration promoted a particular perception of the compatibility of the goals between US energy policy and the UNFCCC and its Kyoto Protocol in reaction to structural changes, it was circumscribed by domestic coalitions in terms of what the administration could achieve at the negotiations (Downie, 2013:27). The Clinton administration knew that it was unable to gain the support of the Senate since the latter required a two-thirds majority in order to ratify international treaties according to Article II, Section 2 of the United States' Constitution (Wirth, 2015:8). Notwithstanding the administration's negotiating efforts, domestic ratification of the Kyoto Protocol was unattainable since developing nations were precluded from having controls placed on their emission levels and the potential harm to the US economy (Percival, 2014:140). Because of the Senate's verbalised hostility, the Clinton administration did not even present the Kyoto Protocol to the Senate for ratification (Percival, 2014:140).

Although Congress was able to restrict the Clinton's administrations support of the UNFCCC and Kyoto Protocol within the federal structure of the US political system, the Clinton administration continued to show support for the climate change regime until the end of his presidency in spite of Congressional opposition and his administration contributed the most financial support during the negotiating process in Kyoto and also made great financial contributions towards the Second Assessment Report (AR2) as well as related scientific research into climate change (Depledge, 2005:18). However, the USA's inability to ratify the Kyoto Protocol essentially limited the Protocol's effectiveness and stalled the global climate change negotiations for years (Bang *et al*., 2012:755). The negotiating process[110] that ensued after the finalisation of the Kyoto Protocol which sought to establish the Protocol's rules was problematic and collapsed at the sixth Conference of the Parties (COP 6) in The Hague, after an intense disagreement between the USA and the EU towards flexibility mechanisms and specifically disagreements regarding the role of sinks in mitigation (Downie, 2013:26 – 27; Justus and Fletcher, 2001:1).

5.4 Linking the USA's Energy Policy and Position within the UNFCCC

By the 1990s, US energy policy would have to incorporate a multi-faceted set of issues. The Democratic Clinton administration would have to deal with an important implication of the

[110] The mechanisms that would allow for the implementation of the Protocol were adopted in 2001 under the Marrakesh Accords which articulated the rules that would govern the agreement's operationalisation such as the accounting involved for the emission and reduction of GHGs (Wirth, 2015:7).

end of the Cold War, wherein, in spite of the USA's hegemonic position in the anarchic system, economic interests would prevail over traditional security concerns within a unipolar distribution of power. This is not to negate the assumptions of realism, the international system is still a competitive one, and states compete not only for security but also for power. In light of this, since ignoring environmental externalities was becoming increasingly difficult, the Clinton administration made a concerted effort to integrate the goal of climate change mitigation into US energy policy as reflected in the administration's promotion of *The Climate Change Action Plan* (CCAP) and the implementation of a BTU tax on the heat content of the fuel as a policy tool due to policy-makers' perception of the compatibility between environmental regulation and economic growth. It was hoped that this would be able to simultaneously enhance economic growth while reducing pollution. Historically, the prevailing view was that the goals of environmental protection and energy production were irreconcilable since increased environmental protection would increase the costs of energy to US consumers and industries, and in the specific context of the USA, environmental externalities were not factored into the price of energy which allowed the cost of energy to remain artificially low giving it a source of comparative advantage in international markets (Tomain, 2007:1203). For decades, efforts to link the two policy goals have been resisted since it would disadvantage the USA's global competitiveness by increasing the cost of energy. Therewith, since power and security remain the most important state objectives in the international system, attempts by the Clinton administration to redress the issue of environmental protection was resisted at the federal level by Congress leading to a hierarchy and incongruence of policy goals with security and power ultimately trumping others and leading to the inability to integrate climate change mitigation into US energy policy because of the concerns for the increase in the cost of US energy and resultant hegemonic decline relative to other states.

This must ultimately be understood in accordance with the changing incentives of the structure of the international system. With the end of the Cold War, two structural changes occurred. While still hegemonic, the USA was no longer the hyper-power of the post-World War Two era and had to carry out its role in a weaker position. Although the bipolar system came to an end and the Soviet Union was no longer a threat to US interests and the international system became a unipolar structure, emerging economies, alongside European countries and Japan, presented significant rivals to the USA, one that decision-makers could

not ignore as economic competition became paramount and would have implications for the USA's power and security (Levinson, 1996; Stoga, 1993; Waltz, 1993: 59 - 60).

At the structural-level, the end of the bipolar distribution of power emphasised economic competition, while presenting policy-makers with a set of multi-dimensional and conflicting policy objectives (Waltz, 1993: 59 - 60). While the international system was characterised by a unipolar distribution of power and the exuberance of the end of the Cold War, the USA's energy dependence was nevertheless higher compared to 1974 whereby the dependence on oil exports, which in 1973 represented 35% of consumption, by 1994 represented 50% (Miller, 1995). Within this complex structural context, the Clinton administration attempted to link energy, climate change and economic issues in its energy policy to strengthen the US economy, thereby enhancing its hegemonic position and security in the anarchic international system (Miller, 1995; Williamson, 1994:115). The administration was concerned about resolving the USA's trade deficit and energy dependence through the combination of previously incongruent goals in its energy policy (Levinson, 1996; Miller, 1995). Moreover, at the structural level, the Clinton administration was influenced in its energy policy goals because of competition with Germany and Japan whose manufacturers attained greater energy efficiency which allowed them to have lower production costs giving them an advantage internationally (Levinson, 1996). The Clinton administration thus responded to the complex incentives provided by the international system in its attempt to enhance the competitiveness of the US economy relative to its competitors.

At the federal level, Congressional politics impeded the Clinton administration's preferred energy policy and thus limited the Clinton administration's approach towards synthesising environmental regulation and economic goals in its energy policy (Agrawala and Andresen, 1999:469). The Clinton administration faced opposition from both Congress and vested interests in its pursuit of its energy policy goals with Congressional opposition stemming from heightened worries as to whether environmental regulation would undermine US economic growth policy (Agrawala and Andresen, 1999:469; Hilzenrath, 1993). Due to Congressional opposition, the Clinton administration would be limited in its approach towards its hard law stance towards the UNFCCC (Agrawala and Andresen, 1999:469; Parker *et al*., 2011:7).

The structural level would likewise have important implications for the US position within the UNFCCC and its Kyoto Protocol. Structurally, the US position in the UNFCCC was more

complex during this era. The international system provides incentives which policy-makers need to respond to. As such, the UNFCCC was an opportunity for the USA to influence the UNFCCC to meet the USA's interests, and likewise enhance the Clinton administration's attempt to merge energy, climate change and economic goals in its energy policy to enhance US power and security (Williamson, 1994:115; Miller, 1995). However, although the USA was a hegemonic state in a unipolar distribution of power, the increasing influence of emerging economies such as China and India who would be exempted from accepting legally binding mitigation targets was a strong structural level limitation on the Clinton administration's ability to cooperate towards the UNFCCC and Kyoto Protocol (Parker *et al*., 1993:7; Agrawala and Adresen, 1999:467). Since these countries were exempted from accepting legally binding mitigation targets this increased concerns over relative gains and cheating. This must also be understood along with the negative consequences that the cost of mitigation could have had for US energy markets and its economy (Parker *et al*., 1993:1; Hilzenrath, 1993). Thus, the structural system presented a contradictory set of opportunities but also constraints that would result in the difficulties experienced by the Clinton administration in its pursuit of cooperation with the UNFCCC and its Kyoto Protocol.

Under such conditions, at the federal level, Congress was unwilling to support measures that would raise the cost of energy to US industries and consumers, since it would lead to US structural decline, undermining its security and leaving it vulnerable in the face of rising challengers Parker *et al*., 1993:7; Agrawala and Adresen, 1999:467. Per consequence, in light of these alterations, and concerns for US power and security, the rift between Congress and the executive led to policy impasse. Moreover, since energy markets were stable throughout this period, there was little incentive to review US energy policy and make the necessary adjustments to its policy goals (Joskow, 2003). Therewith, US energy policy would slip on the policy agenda (Joskow, 2003).

Since the CCAP and the BTU tax on the heat content of the fuel could not be part of the Clinton administration's strategies to meet its objectives in the UNFCCC, it had to rely on other means to pursue its goals within the federal structure of the US political system (Hilzenrath, 1993; Agrawala and Andresen, 1993:467). Moreover, such strategies had to compatible with the US political context and the historical development of its energy policy and thus had to be based on government-industry cooperation, reliance on market incentives, limited government intervention and voluntary programmes (Department of Energy, 1994:66; Tomain, 2007:1203).

The US position in the UNFCCC is influenced by its energy policy principally through the influence of the anarchic structure of the international system and the distribution of power therein where states compete for scarce resources, and where there is no guarantee of security, thus when choosing between contradictory policy goals, states will choose those goals that will increase their power and ability to operate in a self-help system and which are most cost-effective (Waltz, 1993:50). Decision-makers however are simultaneously constrained by domestic politics and international negotiations, a two-level game to make use of Putnam's famous analogy (Moravscik, 1993:4). Moravscik (1993:4) argues that, "the statesmen involved simultaneously calculated the domestic and international implications of their actions."

Although decision-makers may want to increase the power and security of their state within an anarchic international system by advancing those goals which can help them to achieve both power and security, there is no guarantee that they can reach such goals (Waltz, 1993). At the structural level, within the distribution of power in the international system, since the USA is a hegemonic state, it is able to create and abandon international agreements and institutions on the basis of its national interests, which are influenced domestically in reaction to shifts in domestic and international politics based on the perception of the costs of policy goals and their perceived implications for US security and hegemonic position (Jervis, 1978:167 – 168; Mearsheimer, 1994-1995:7).

At the unit-level, policy-makers within the Democratic Clinton administration did not perceive the conflict between the goals of energy security, economic growth and climate change mitigation to be irreconcilable (Williamson, 1994:115; Miller, 1995). The administration thus believed that mitigation costs could be reduced with the right policy instruments, which were the BTU tax and other market instruments (Hilzenrath, 1993; Andresen and Agrawala, 1999:469; Parker *et al*., 2011:5). Congress however was concerned about the change in the distribution of power in the international system with the rise of developing countries, especially China (Parker *et al.*, 2011:6-7), which led to concerns about asymmetrical climate policies and the resulting relative gains and propensity to cheat that would be gained by rivals which would disadvantage the USA while allowing other states to prosper. In the specific context of the US federal political system, the executive has to share power with Congress, and with the exception of a few instances, is not able to act unilaterally to pursue international agreements as per the requirements of the US Constitution (Andresen and Agrawala, 1999:467). In a Republican-dominated Congress, both Republicans and

Democrats indicated their opposition to the Kyoto Protocol and with Congress unwilling to support the Kyoto Protocol, the Byrd-Hagel Resolution solidified this opposition because of the potential negative consequences for the US economy and exemption of developing nations (Andresen and Agrawala, 1999:467; Parker *et al*., 2011:7). Due to this Congressional opposition, the Clinton administration was unable to pursue cooperation towards the UNFCCC and its Kyoto Protocol.

At the structural level, the USA was thus threatened by its relative decline and the changing distribution of power in the international system, but likewise the challenge of designing comprehensive policies to meet the new challenges and trends in the post-Soviet era while still maintaining US power through its economic strength in relation to its rivals (Levinson, 1996; Stoga, 1993). Such decisions were undertaken since economic competition was more pronounced after the end of the Cold War (Waltz, 1993:50 - 51). Per consequence, Congress would not support any agreement that would weaken the US economy since the fossil fuel industry was viewed to be important for its long-term economic prosperity and security (Parker *et al.*, 2011:7; Agrawala and Andresen, 1999:467). In this context, the trade-offs between the UNFCCC and US energy policy were thought to be too high because of this dependence on cheap and abundant fossil fuel energy for long-term economic growth (Hilzenrath, 1993).

At the structural level, it was the concern with maintaining the US hegemonic position relative to its competitors through a reduction of the costs of energy prices to US consumers and industries which determined the scope of US energy policy and its inability to cooperate within the UNFCCC. The Clinton administration attempted to redesign US energy policy to be inclusive of the goal of environmental regulation and economic growth in response to enhancing US hegemonic power in relation to its rivals (Lippman, 1993). However, Congressional opposition would restrict the design of US energy policy to have greater emphasis on environmental regulation (Parker *et al.*, 2011:7; Agrawala and Andresen, 1999:467). The unipolar distribution of power, characterised by economic competition, would be instrumental in restricting the design of US energy policy as US economic growth based on fossil fuels remained paramount for its power and security (Waltz, 1993:50; Agrawala and Andresen, 1999:469). At the Kyoto Protocol negotiations, Congressional opposition would continue to be based on the potentially high costs this would incur to the US economy (Parker *et al*., 2011:7; Agrawala and Andresen, 1999:467). The structure of the international system would further emphasise concerns over asymmetrical costs and cheating

by other states (Parker *et al*., 2011:7; Agrawala and Andresen, 1999:467). The incongruence between US energy policy and the goal of the UNFCCC would be emphasised by Congress due to the threat it posed to the USA relative to its rivals within the anarchic international system (Parker *et al*., 2011:7; Agrawala and Andresen, 1999:467).

The interaction between the two levels thus reflected the complex and contradictory goals facing policy-makers at the time. While the international system presented the incentives that policy-makers had to respond to, there were no definitive means available as to how these ought to be interpreted nor how to enhance US power and security in the midst of the ascent of emerging economies and the need to enhance the USA's economic strength. At the federal level, the division between Congress and the Clinton administration towards the UNFCCC and its Kyoto Protocol, as well as US energy policy, would not permit the Clinton administration to pursue either its preferred foreign or energy policies due to the structure of the US federal system and the power in Congress to limit the executive's policies therein (Parker *et al*., 2011:7; Agrawala and Andresen, 1999:467).

5.5 Conclusion

The end of the Cold War was an important factor that contributed to the design of US energy policy. Instead of the overt concern on security, US energy policy increasingly focused on environmental regulation and economic competitiveness which also had implications for the US position in the UNFCCC. The Clinton administration was instrumental in the design of the Kyoto Protocol and wished to enhance US cooperation within the UNFCCC. While president George H.W. Bush did not legally commit the United States to reduce its emissions to 1990 levels by the year 2000, president Clinton went ahead and committed the United States to this target and had federal agencies seek a plan to have this attained (Cavanagh *et al.*, 2001:29). To simultaneously meet the goals of the UNFCCC while augmenting US power and security internationally, the Climate Change Action Plan of 1993, and a BTU tax on the heat content of the fuel, were relied on by the administration as a means to enhance the USA's economic growth by linking energy and climate policies.

Yet, Congressional opposition to both the tax and the US position limited the coherence of both domestic and foreign policies. While the Clinton administration played a central role in the design of the Kyoto Protocol in 1997, the Byrd-Hagel Resolution halted the US ratification of the Kyoto Protocol on the grounds that it exempted developing nations and would incur negative consequences for the US economy. In spite of the Clinton

administration's concerted efforts to support the UNFCCC and Kyoto Protocol, an appreciation for the difficulty in designing and implementing coherent policies within the context of US domestic politics should be maintained. Due to Congressional opposition, the Clinton administration was unable to attain their goals, nor design a coherent energy policy and cooperate within the UNFCCC. What mitigation actions could be pursued could only be enacted on a voluntary basis. Concerns for the costs that US energy policy would incur, and the implementation of asymmetrical climate policies, would drive Congressional opposition. With stable energy markets in the 1990s, energy policy would decrease on the political agenda while still centring on the economic assumptions that guided US energy policy throughout the twentieth century. The subsequent Bush administration would pursue a different set of policies to the Clinton administration.

Chapter 6

The George W. Bush Administration (2001 – 2009): Risks to Continuous Supply in the 2000s

6.1 Introduction

There are two major issues that would distinguish the George W. Bush administration (2001 - 2009), these being the renewed concern for energy security, and the decision to repudiate the Kyoto Protocol. After the relatively stable energy markets of the 1990s, energy security would become a policy preoccupation due to the rise in the price of petroleum; the breakdown of California's competitive, deregulated electricity markets, energy shortages in the western United States and an increase in the price of natural gas. The increased energy demand from China and India would further contribute to the instability of global energy markets.

The administration's decision to repudiate the Kyoto Protocol was a major foreign policy alteration in contrast to the Clinton administration. Given the USA's central role in designing the UNFCCC and Kyoto Protocol, the USA's reluctance to follow through in implementing action towards these regimes threatened the efficacy of the Kyoto Protocol. Instead, the Bush administration promoted the use of voluntary and market-based actions to mitigate climate change rather than a set of quantified, legally-binding mitigation targets. Such insistence is further influenced by the type of energy policy that the Bush administration wished to pursue.

Under the George W. Bush administration, the two central concerns to emerge that would drive US energy policy were the country's increased dependence on foreign petroleum and energy security (Klare(a), 2004:57). To meet these challenges, the Report of the National Energy Policy Development Group in 2001 and the Energy Policy Act of 2005 (EPACT2005) would centre on the increased production of fossil fuels at the expense of environmental regulation. Reconciling a domestic energy policy that augmented fossil fuel production with a foreign policy geared towards mandatory mitigation actions was simply not possible. The development of this energy policy occurred in the context of strenuous circumstances for the USA's energy security, as well as an ideological inclination and the influence of vested interests towards a focus on fossil fuel production as the panacea to the nation's energy dilemma. This chapter outlines the context that the Bush administration

emerged in, followed by a discussion of the related factors that would play a role in influencing this administration's energy policy and stance towards the UNFCCC and Kyoto Protocol.

6.2 The Bush Administration's Energy Policy

Policies are designed not only within a historical context, but also within a framework of ideas and goals that form the guidelines for the policy-makers involved (Hall, 1993:279). When historical circumstances alter to such a degree that reconciling the ideational framework that informed policy design to the new context is increasingly impractical, policy-makers need to re-asses the design of their energy policies (Helm, 2005:1). Although such a notion is accurate to a degree, what is striking about the USA is that, with the exception of war and politically-motivated petroleum embargoes, there has been a remarkable degree of continuity to US energy policy as a set of economic assumptions guided the design of US energy policy. Therewith, in light of these circumstances, the George W. Bush administration would establish the Report of the National Energy Policy Development Group in 2001 and the Energy Policy Act of 2005 (EPACT2005).

The George W. Bush administration (2001 – 2009) would need to design its energy policy within a new set of conditions that were markedly different from the previous fifteen years. A new energy crisis occurred in the USA at the end of the 1990s that resulted from increasing natural gas prices and the tripling of the price of petroleum in 1999, electricity shortages in the western United States and the breakdown of California's competitive, deregulated electricity markets when the wholesale electricity price increased more than ten times the previous year to $317 per megawatt hour and the price of natural gas, which supplied half of the state's electricity, increased four times to that of the previous year in December 2000 with the state experiencing blackouts throughout the summer of 2001 and its two major utilities experienced serious financial problems (Joskow, 2001:1; Helm, 2002:173; Timney, 2002:109 - 110). Critically, the United States began to import half of the petroleum that it consumed by April 1998, deteriorating the dependency that the country had on foreign producers (Klare(a), 2004:56) Overall, after the relatively stable energy markets of the 1990s, energy security would emerge firmly on decision-makers' agenda in the 2000s as a result of a combination of high petroleum prices and a tight petroleum market (Yergin, 2006:69; Helm, 2002:173; Hamilton, 2011:20).

Rising demand predominantly from the developing world[111] - significantly China and India - over what appeared to be increasingly dwindling supplies further constrained the market and contributed to the price increase raising further alarm in industrialised countries (Yergin, 2006:72; Westphal, 2006; Correljé and Van der Linde, 2006). In this context, 2004[112] represented a turning point because a sense prevailed that an era of inexhaustible and inexpensive energy was over (Deutch, 2004:1; Dorian *et al.*, 2006:1984) since:

> "Asia's growing impact became widely apparent in 2004, when the best global economic performance in a generation translated into a "demand shock" – that is, unexpected worldwide growth in petroleum consumption that represented rate of growth that was more than double the annual average growth rates of preceding decade." (Yergin, 2006:72).

While there were similarities between the energy security concerns of the 2000s; these were also qualitatively different from the security concerns of the 1970s (Deutch, 2004:1). Energy supply systems have become more complex than in the 1970s which posed a new set of

[111] China was self-sufficient in its petroleum production until 1993 (Yergin, 2006:71). However, between 1993 and 2006, China's GDP would triple while its demand for petroleum would double during the same period (Yergin, 2006:71). India's accelerated economic growth was partially the outcome of the high petroleum prices emerging from the onset of the first Gulf War which created for the country a balance of payments shock in 1993 (Yergin, 2006:72). Manmohan Singh, its then finance minister, began a number of far reaching reforms because the country had virtually no foreign currency reserves at its disposal which provided the leverage for its economic growth (Yergin, 2006:72). Even though India's petroleum consumption was forty percent less than China's in the previous decade, its demand for petroleum was projected to increase in tandem with its economic growth (Yergin, 2006:72). The economic growth of China and India led to the two countries' petroleum consumption to exceed that of North America's by 2005 (Yergin, 2006:72).

The process of globalisation had also been responsible for the unprecedented demand in energy as a result of China's and India's integration into the global economy, and the tight balance in the energy market, a result of the "demand shock" causing an upward spiral in the price of petroleum (Yergin, 2006:34). By 2004, China's petroleum demand had increased by seventeen percent which is an unparalleled rise in energy demand from a historical point of view and drove petroleum prices even higher (Yergin, 2006:34).

[112] After 2005, production did not continue to increase, even though in contrast to similar events, there was no geopolitical event that appeared to be responsible for this, or in spite of the "absence of a significant physical disruption in the supply of oil" (Hamilton, 2011:21; Hamilton, 2012:18).

challenges to energy security[113] (Chester, 2010:889). While strategic transportation channels and cross-border pipelines continued to remain a source of insecurity, to this has been added the liberalisation of energy markets as part of government energy policy, energy markets and financial markets have become increasingly related, new sources of demand have emerged mainly in developing countries, the number of supply nations has been concentrated to a few countries in a highly volatile region, and fossil fuel dependence characterised most countries' energy mix while energy production and consumption is responsible for 80% of global GHG emissions; and interdependencies had been established between petroleum refining, natural gas processing and electricity (Chester, 2009:160; Yergin, 2006:69; Westphal, 2006; Bamberger, 2006:5). In the midst of these trends, rising consumption from new players meant that demand for energy in the United States was forecasted to increase alongside other major developing countries (Deutch, 2004:1; 9).

This period also witnessed the increased uptake of new energy technologies which included hardware and software able to utilise previously "non-utilisable" reserves, as well as developments in alternative and renewable energy technologies (Stanislaw, 2012:1). In the early 2000s, renewable energy investment, capacity and integration throughout all sectors began to significantly increase (REN21, 2014:5). There were a number of reasons for this expansion: the effects of the energy crisis which started in the 1970s, with accompanying economic recessions, illuminated the importance of energy for economic and national security, secondly, a number of countries established markets for renewable energy and helped to advance technological progress as well as economies of scale, and thirdly, the need to mitigate and adapt to climate change has increased the expansion of renewable energy (REN21, 2014:5). During this period, US states began to increase renewable energy procurement in the wake of the federal government's inaction in this policy area. These technological innovations have facilitated geopolitical, environmental and economic transformations and have also increased competition amongst nations to gain control over the technological hardware as well as software (Stanislaw, 2012: 2 - 3).

6.2.1 Structural Influences

Waltz reminds us that "Structural change begins in a system's unit, and then unit-level and structural causes interact. We know from structural theory that states strive to maintain their

[113] Up to 2008, the price of energy was increasing while demand for energy, especially natural gas, has been growing globally (De Jong *et al*., 2010: 222).

positions in the system. Thus…great powers try to arrest or reverse their decline (Waltz, 1993: 49-50). Under the Bush administration, the USA had to respond to the challenges to its energy policy and energy security within a distribution of power that was altering with the introduction of developing countries as important players therein and constraints on the USA. As such, it is important to recognise that under these new circumstances and their implications for energy security, US policy-makers had to reconsider federal energy policy when the abundance of the 1990s gave way to the precariousness of the 2000s (Helm, 2005). In 2001, the USA experienced its most serious energy shortages since the crises of the 1970s, with this shortage reflected in increased energy prices[114] (Report of the National Energy Policy Development Group, 2001:viii). Demand for energy was projected to outstrip production levels if these were to increase at the same rate as 1990 levels (Report of the National Energy Policy Development Group, 2001:viii; Klare and Volman, 2006:612). Because of the continuation of the recognition between energy use and security and power in an anarchic international system, due to these trends, the administration was concerned about the implications this would have for the strength of the economy and national security citing that "America's energy challenge begins with our expanding economy, growing population, and rising standard of living. Our prosperity and way of life are sustained by energy use." (Report of the National Energy Policy Development Group, 2001:viii; ix). Moreover, in 2001, the USA was producing 39% less petroleum than it did in 1970 (Report of the National Energy Policy Development Group, 2001:x). In the midst of these trends, the USA's dependence on foreign sources of petroleum, and the implications thereof for national security and the economy was a key concern (Report of the National Energy Policy Development Group, 2001:viii).

The Bush administration's response to these trends would be influenced by the USA's relative position within the distribution of power, and the implications for the USA's security and power in an anarchic system arising from these trends, with the USA's power and security increasingly threatened because while it was still hegemonic, the USA had been experiencing structural decline in an international system that increasingly had a multipolar distribution of power (Wohlforth, 1999:6). That is, by the early 2000s, the distribution of power in the international system altered, with traditional powers such as the European Union and Japan still challenging the USA, but increasingly alongside emerging economies, such as

[114] In the preceding years, the United States had become increasingly dependent on foreign sources of petroleum (The White House, 2005(b)).

China, India and Brazil, for scarce resources and power. The principal challenge was thus how to maintain and protect the US hegemonic position in the anarchic system in the face of such challenges.

Since low cost fossil fuels were an integral aspect of US hegemonic power, the severity of these issues could potentially have severe implications for the security and power of the USA in an anarchic international system in the midst of the ascent of rivals to the USA (Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11). Recognising the seriousness of the matter, President George W. Bush assembled the National Energy Policy Development Group in his second week in office to develop an overview of the nation's energy policy in the recognition that more than a superficial solution was required for these issues (Report of the National Energy Policy Development Group, 2001:viii; Klare(a), 2004:56). In order to meet these challenges, the National Energy Policy Development Group, which was chaired by vice-president Richard Cheney, produced a report[115] in May 2001 that emphasised the increased supply of domestic fossil fuel energy from coal, petroleum, and natural gas as well as increased usage of nuclear power and hydropower while reducing government regulation (Reardon, 2004:452; Report of the National Energy Policy Development Group, 2001:xiii; xii). Under the auspices of the report, the United States had to foster a strategy that could assure that supply can meet growing demand in order to protect US national security as well as economic well-being (Volman, 2003:573; Klare and Volman, 2006:612). Since the most critical goals of US energy policy were economic growth and energy security as the vehicles of US power and security in a competitive system, the dependence on the supply of cheap fossil fuels at the expense of other policy goals such as environmental regulation was the main trade-off in order to protect the USA's hegemonic position within the distribution of power *vis-à-vis* its rivals while enhancing its security by enhancing low cost fossil fuel production. While the Report asserts that the trade-off between environmental protection and energy production is no longer as stark due to advances in technology (Report of the National Energy Policy Development Group, 2001:xiv), the Report's overt commitment to fossil fuel production and consumption would undermine its commitment to environmental protection, and climate change mitigation in particular.

The strategy's insistence on a fossil-fuel based energy strategy to meet these challenges can be traced to the historical development of petroleum being the bedrock of US power in the anarchic system because of its importance for the US economy and seeming low cost relative

[115] This publication became known as the Cheney Report (Volman, 2003:573).

to other energy sources, thereby in so far as the challenge of increasing the supply of energy was concerned, petroleum in particular was a major policy driver at the time in order to enhance US security and power within the distribution of power *vis-à-vis* its rivals due to its importance for US economic stability and growth (Klare and Volman, 2006:612). A number of regions were highlighted by the report as stable suppliers such as Africa[116], Latin America and the Caspian Sea region as well as a controversial proposal to produce domestic reserves found in the Arctic National Wildlife Refuge (ANWR) in order to meet the nation's energy challenge, a proposal that raised the ire of environmentalists (Volman, 2003:574; Klare and Volman, 2006:612; Cleveland and Kaufman, 2003:486 - 487). However, given the circumstances faced by the Bush administration and its goals, it is ironic that less emphasis was placed on renewable energy and mitigation within the UNFCCC which could decrease US dependence on petroleum imports and enhance its energy security. In spite of the synergies between climate change mitigation and the reduction of US dependence on petroleum through increased renewable energy use and efficiency measures, a key concern of the Bush administration was the potential impact of climate change mitigation on economic growth (Reardon, 2004). Such a policy concern needs to be situated in the administration's concern for the USA's position in a competitive global economy, where strong emerging economies, particularly China, were posing as considerable challengers (Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11). Therefore, the Bush administration responded to the incentives provided by the international system which was influenced by the increasing competition between the USA and emerging economies within the changing distribution of power by emphasising the goals of economic growth and energy security within its energy policy at the expense of environmental protection as this would enhance its comparative advantage by maintaining low cost energy (Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11).

Since 2001, when the George W. Bush administration first assembled the National Energy Policy Development Group, the USA's increased dependence on foreign petroleum, as well as increased energy prices drove the need for a new energy policy; and in the prior months of 2005, President Bush outlined a plan to attain the nation's energy independence (Holt and Glover, 2006:1; IEA, 2007:9; The White House, 2005(b)). While energy policy has a number of goals, it is often the case that it is an upsurge in the price of petroleum that pressurises

[116] It was thus in 2002 that American *national security* and *Africa* were for the first time used concurrently by official Pentagon documents (Volman, 2003:573).

policy-makers to re-assess US energy policy as this impacts US economic growth and per consequence power and thereby its position within the distribution of power (Bamberger and Behrens, 2005:2). Therewith, on the 8th of August 2005, President Bush signed into law the first energy plan since 1992 (The White House, 2005(a); IEA, 2007:9). The Energy Policy Act (EPACT2005) reflected many of the recommendations of the Report of the National Energy Policy Development Group.

To varying degrees, three issues were addressed by the EPACT2005: US energy security, energy dependence and climate change. In contrast to the EPACT1992 which was designed with a consideration for efforts to mitigate climate change under the UNFCCC, climate change mitigation proved to be a peripheral issue in the design process of the EPACT2005 (Parker and Blodgett, 2008:16). Instead the main focus was on energy security and energy supply with little mention of the potential implications for climate change mitigation (Parker and Blodgett, 2008:16). Rather, the debate in the USA over future energy supply revolved around how to improve energy security by reducing US dependence on foreign petroleum imports (IEA, 2007:9). The USA was thus the only IEA country where energy consumption was forecasted to increase and which also lacked a policy designed to internalise the external cost of GHG emissions (IEA, 2007:9). In the midst of these issues and goals, clean energy technology was anticipated to be a solution to both these challenges (IEA, 2007:9). Although the Bush administration was hesitant to address climate change, the Energy Policy Act (EPACT 2005) did put in place new standards in clean energy use driven by increased public awareness and concern over anthropogenic climate change (IEA, 2007:9). However, the administration and Congress lacked co-operation in this area (IEA, 2007:10).

In addition, the Bush administration emphasised the national goal of reducing the US dependency on foreign petroleum due to concern over rising demand from India and China, with the implications that this had for price increases and the availability of petroleum and corresponding implications for US power and security in relation to these rising rivals in the international system which must be understood in the context of US consumption growing faster than its domestic production (Bush, 2005; Chanlett-Avery, 2005). The link between changing economic circumstances, and economic security and energy policy was thereby highlighted. It was therefore the Bush administration's preoccupation with unhindered economic growth in an anarchic and competitive system and preventing other countries from gaining an unfair advantage that focused its attention on those policy options that could reduce Carbon Dioxide (CO_2) emissions without hurting economic growth (Reardon, 2004).

The Bush administration emphasised the link between fossil fuel production and power in the international system as a means of enhancing US self-help and power in an anarchic system increasingly dominated by competition with emerging economies while the US hegemonic position was experiencing structural decline (Report of the National Energy Policy Development Group, 2001:viii; ix; Klare(a), 2004:56; Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11). With the new challenges that emerged in the early 2000s especially related to increasing energy prices alongside accelerated demand from India and China, as well as increasing US consumption, the changing distribution of power in the international system, with the influence of strong emerging economies such as China and India, alongside European countries and Japan being a consideration, renewed the administration's concern with the energy policy goals of energy security and fossil fuel production as a necessity for US economic well-being as well as national security (Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11). With the relative decline of the US hegemonic position within an increasingly multipolar distribution of power, the Bush administration was driven to maintain and enhance the US hegemonic position therein through the emphasis on maintaining low fossil fuel prices but in the context of increasing competition for scarce resources from China and India, as well as developed nations (Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11). Because the competitiveness of US industries depended on low cost fossil fuels, and per consequence economic growth for US power and thereby hegemony, within these dynamics renewed focus had to be placed in the Bush administration's energy policy on ensuring that supply can meet increasing demand, at the expense of other goals such as environmental protection and climate change mitigation, which could potentially harm US economic growth and thereby weaken its position relative to its competitors within the anarchic international system (Volman, 2003:573; Cleveland and Kaufman, 2003:486 – 487; Eckersley, 2007:317). Such developments would be influenced by the unit-level which would impact the USA's energy policy within the above-mentioned dynamics.

6.2.2 Domestic Influences

While the energy policy designed under the Bush administration had as its main goals of security and economic growth influenced by the structure of the international system, the content of the policy in terms of its goals can be traced to the unit-level. Due to the particular challenges faced by the USA at the start of the 2000s characterised by energy security challenges of precariousness rather than the abundance of the 1990s, the Report of the

National Energy Policy Development Group and the EPACT2005 were chiefly concerned with US dependence on foreign petroleum and energy security (Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11; Report of the National Energy Policy Development Group, 2001:viii, xii). As will be highlighted in this section, in order to understand these policies' approach to these issues and the era's challenges, three factors would influence these policies at the unit-level: the ideological predisposition of the Bush administration, the influence of vested interests, and Congressional stalemate at the federal level.

The California energy crisis, the unprecedented rise of US dependence on foreign petroleum to over fifty percent of consumption in 1998, and rising energy prices provoked a reconsideration of US energy policy in the wake of these challenges. However, there was no single solution to the energy crisis that decision-makers faced at the time. In reaction to these events, many environmentally-sensitive politicians would argue that US energy policy should be drastically altered to focus on renewable energy sources, hydrogen power, as well as conservation (Klare(b), 2004:396). In the midst of these trends, the Republican Bush administration emphasised the national goal of reducing the US dependency on foreign petroleum by increasing domestic petroleum production which formed the basis of its energy policy (Jacobs, 2010:147). There thus emerged a tension between two approaches to the energy crisis faced by the USA at the time, one that emphasised conservation while the other approach emphasised production (Jacobs, 2010:146). Often, support for one or the other measure could be traced to a partisan divide between Democrats and Republicans (Jacobs, 2010:141, 144).

The ideology of the Republican Party would play a role in influencing the Bush administration's policy-makers by advocating decreased environmental regulation, and instead, rather focus on the private sector's increased domestic production due to policy-makers' perception that economic growth and environmental protection are incompatible due to the costs associated therewith (Jacobs, 2010:141, 144). This nevertheless presented a dilemma since US domestic production was forecasted to decrease which meant that US dependence on foreign petroleum would increase (Klare(b), 2004:396). This focus on increasing supply would appear stark in contrast to the mandates advocated by the Carter administration in the 1970s which focused on conservation efforts (Jacobs, 2010:148 - 149). However, although ideology presented a critical factor that shaped US energy policy at the time, this must be balanced with the incursion of vested interests. The Report of the National Energy Policy Development Group had a strong input from the fossil fuel industry as both

George W. Bush and Dick Cheney had in the past headed companies in the energy sector, and likewise the report was sent for recommendation and advice to a number of major fossil fuel corporations, which included Enron (Jacobs, 2010:152, 157). Subsequently, the EPACT2005 would likewise provide tax incentives in favour of companies in the fossil fuel industry to increase domestic production (Jacobs, 2010:162). This incursion by vested interests was thus combined with an ideological predisposition to reduce the role of the federal government and enhance domestic production in US energy policy (Jacobs, 2010:168).

Yet, the Bush administration's attempt to reformulate US energy policy did meet resistance from Congress at the federal level, especially in the area of the goal of the reduction of environmental regulation by the federal government within the report of the National Energy Policy Development Group and EPACT2005 related to drilling in the ANWR (Jacobs, 2010:159 - 160, 162). Within this altering context, in contrast to the relative stability of the 1990s, the continued Congressional inaction over US energy policy characterised by continuous debate and political divisiveness was viewed as a strong restriction on the design and passage of a comprehensive policy that could mitigate these challenges (Bush, 2005). Yet, in the wake of the September eleventh tragedy, the use of executive privileges was used extensively by the Bush administration to reduce environmental regulation, especially those restrictions related to the coal industry indicating a complex relationship between the executive and Congress at the federal level (Jacobs, 2010:153 – 154,156).

Since the goal of climate change mitigation was perceived as undermining the goal of increased fossil fuel production and thereby increasing costs to the US economy by policy-makers within this administration, in 2001, the Bush administration announced that it would not cap global CO_2 emissions, citing negative consequences for economic growth as justification (Reardon, 2004:452). The coal industry, which supported Bush during his electoral campaign, strongly opposed attempts to mitigate climate change (Reardon, 2004:452). Coal made up 36% of CO_2 emissions from energy consumption and with the technology available at the time, there would have been few means available to reduce emissions except by substituting coal and an emphasis on voluntarily actions that do not interfere with economic growth (Reardon, 2004:452). In this context, a market-based approach was promoted to mitigate climate change (Jacobs, 2010:160). The preoccupation with the petroleum, natural gas, and coal industries drew on the importance these industries played in supplying cheap and abundant energy to consumers which gave US industries a competitive advantage in the global economy and thereby enhancing its hegemonic position

and influence, especially as low cost energy was historically an important component of US hegemony and security.

Nonetheless, in the vacuum created at the federal level, sub-national actors have filled the void in an attempt to tackle the climate change challenge with states and municipalities having thus far implemented their own policies to deal with climate change that are on par with their European counterparts (Fisher, 2013:770 - 771). To enhance their ability to do so and to counter-act some of the existing measures, during George W. Bush's presidency, a number of states attempted to take legal action to invoke the regulation of carbon emissions and took legal action against the Environmental Protection Agency (EPA) to have it curb GHG emissions or allow states to do so themselves (Fisher, 2013:770). An important watershed moment in US domestic politics occurred in 2007 when the Supreme Court, in the landmark *Massachusetts v. EPA*, ruled that GHGs are "'air pollutants' subject to regulation under the Clean Air Act" (Percival, 2014:134). This ruling provided the legislative foundation that enabled the EPA to regulate the emission of greenhouse gases which allowed the US legal system to adapt to changing conditions (Percival, 2014:134 - 135). As a result, numerous local level policies have been implemented from the bottom-up that have encouraged greater action towards climate change (Lutsey and Sperling, 2008:673).

6.3 The Bush Administration, the US Position in the UNFCCC Negotiations and US Energy Policy

A commonly held notion is that the Bush administration had a dismal approach towards climate change both at home and abroad since the United States was viewed as having retreated from global environmental leadership through its obstructionist position in the UNFCCC (Pugh, 2015; Ivanova and Esty, 2008:57). Moreover, under the Bush administration, the United States retracted from the Kyoto Protocol as well as many other environmental policies that were adopted by the Clinton administration (Selin and VanDeveer, 2011:121; Selin and VanDeveer, 2009:3; Depledge, 2005:11; Parenteau, 2004:363). While Al Gore signed the Kyoto Protocol in November 1998 in the hope that the composition of the Senate would alter in the future to be more receptive towards it, George W. Bush made it clear that his administration would not ratify the Protocol soon after he came to office; a position which he reaffirmed in March 2001 wherein he stated in a letter to Republican senators that he would not support the Kyoto Protocol (Wirth, 2015:8; Depledge, 2005:19). Having being involved in the architecture of the global climate change regime, the

USA's repudiation of the Kyoto Protocol presented a major foreign policy shift – a stance which caused severe criticism from the international community (Lisowski, 2002:101; Justus and Fletcher, 2006:9).

The decision to not ratify the Kyoto Protocol because it did not stipulate mandatory emission reduction targets for developing countries alienated many developed and developing nations in relation to the USA in the negotiations for the next decade (Selin and VanDeveer, 2011:121). Not only did the Bush administration's repudiation of the Kyoto Protocol impact the USA's legal stance at the UNFCCC, but this decision could have also prohibited the Protocol being enforced by any other state (Wirth, 2015:8). In order for the Protocol to enter into force it had to be ratified by those states which accounted for 55% of total emissions at 1990 levels of which the USA accounted for approximately 35% (Wirth, 2015:9). It was only once the Russian Federation ratified the Protocol that it was able "to enter into force in February 2005" (Wirth, 2015:9). In spite of the USA's rejection of the climate change regime, it did not attempt to prevent other states from partaking in the negotiating process under the UNFCCC, while the Bush administration continued with negotiations under the UNFCCC stream in order to endorse their own objectives, but did not partake in the Kyoto Protocol negotiations[117] (Depledge, 2005:21, Justus and Fletcher, 2006:10). Although controversial, this administration had a far more complex and nuanced position towards both climate change and the UNFCCC wherein the USA promoted the use of voluntary measures and a technology-centric approach domestically and designed multilateral agreements to mitigate climate change that were not legally-binding (Pugh, 2015). Thereby, to commence this discussion, it may be useful to begin with the highlight of the Bush presidency: this administration's decision to repudiate the Kyoto Protocol.

6.3.1 Structural Influences

While the structure of the international system is a permissive rather than a necessary cause (Waltz, 2001:232 – 233), it does emphasise certain options while limiting others within the distribution of power in the international system since states have to rely on self-help in order to attain their security within this anarchic system. Although the USA achieved their objectives in the Kyoto negotiations, namely the inclusion of the flexibility mechanisms, during the Bush administration, the USA was the only major industrialised country to not be

[117] By July 2001, the United States was participating in the Kyoto Protocol negotiations as an observer and not as a Party during the discussions (Leggett, 2011:12).

a party to the Kyoto Protocol (Parenteau, 2004:366; Selin and VanDeveer, 2011:121; Legget, 2011). At the start of its term in office in 2001, the Bush administration officially justified their opposition to the Kyoto Protocol for the following set of reasons in a report released on the eleventh of June 2001: the Kyoto Protocol was ineffective since it exempted developing countries, it will have negative consequences for the USA's economy, and the USA's dependence on other states will increase due to the need to acquire emission reduction credits from other states (Lisowski, 2002:107). The Bush administration further justified his repudiation of the Kyoto Protocol by referring to the Byrd-Hagel Resolution and California's energy crisis (Lisowski, 2002:101). Overall, the two primary reasons justified by the Bush administration for this policy reversal was the Kyoto Protocol's inclusion of "the use of excessively strong targets" and the exemption of developing nations from adopting mandatory mitigation commitments (Depledge, 2005:19).

There were important structural-level impediments that influenced the Bush administration's stance towards cooperation within the UNFCCC and Kyoto Protocol. Because of the anarchic structure of the international system, states tend to be limited in their ability to cooperate due to concerns that the relative gains from such interactions will advantage other states (Grieco, 1988:600). In addition, interstate cooperation is further limited when there are security implications involved due to the distribution of costs both across and within the states involved. Due to these concerns for both relative gains, and US security, the Bush administration and Senate justified the repudiation of the Kyoto Protocol by underscoring the level of uncertainty and the high costs involved surrounding the mitigation of climate change for the US economy (Lisowski, 2002:109; Parker *et al*. 2011:7). These concerns for the USA's relative gains and security have to be placed within the constraints of the changing distribution of power within the anarchic system marked by the relative decline of the USA and the rise of emerging economies. The asymmetrical design of the Kyoto Protocol that would exempt developing states from legally binding mitigation targets would thereby have advantaged strong emerging economies in global trade, while there would have been repercussions for US competitiveness and a strong possibility of carbon leakage because of the increased costs of energy prices with consequences for both the distribution of power in the international system and US security as the USA's hegemonic position would be undermined due to the economic costs it would have incurred while its rivals would have been advantaged (Parker *et al*., 2011:7; Roberts and Downey, 2016; Bohan, 2007). To further emphasise this point the afore-mentioned report, "observes a two percent reduction in GDP

would be equivalent to the 1970s oil shock, and a four per cent reduction would transform the US economy 'from one of strong growth to recession, with potentially significant repercussions for the global economy'" (Lisowski, 2002:109). The Bush administration thus underscored that the Kyoto Protocol breached the Byrd-Hagel Resolution as it undermined the US economy and US structural power in the international system (Lisowski, 2002:109; Eckersley, 2007:317).

Since US power in the international system was augmented through cheap fossil fuel prices by enhancing the competitive advantage of US industries in global trade, the need to maintain this fossil fuel dependence was reiterated when situated in relation to US structural decline in the international system (Parker *et al*, 2011; Tomain, 2007:1203). Moreover, with the rise of rivals that would attain relative gains because of the Kyoto Protocol's emphasis that developed nations undertake mandatory mitigation action, the Bush administration would choose the opposite strategy that would place further emphasis on fossil fuels, and petroleum, to maintain the US hegemonic position in relation to their rivals (Lisowski, 2002:101, 107, 109; Eckersley, 2007:317; Parker *et al*., 2007:7). Given the recommendations of the Report of the National Energy Policy Development Group and the design of the EPACT2005, due to the challenges faced by this administration, energy security and the USA's dependence on foreign sources of petroleum were the main concerns of US energy policy at the time (Minsk, 2017:5; Report of the National Energy Policy Development Group, 2001:viii; Klare and Volman, 2006:612). As a repetition of past concerns, the costs of mitigation reduced the administration's support for such measures over fears of the potential structural decline of the USA in the international system relative to its rivals (Lisowski, 2002:108; Parker et al.,:7). This was in spite of the fact that there was potential that the goal of climate change mitigation could simultaneously enhance the policy goals of both US energy security and reduce its dependence on foreign sources of petroleum (Toke and Vezirgiannidou, 2013:538; Kim, 2014). Hence, the trade-offs between these policy goals and the means to attain them limited the Bush administration's support for mitigation. Thus, the negative consequences for the USA's economy, an important aspect of its hegemony, was a formidable structural level impediment to the Bush administration's participation in the Kyoto Protocol, especially given the exemption of developing countries from having to undertake mitigation action (Lisowski, 2007:107) which could have consequences for the distribution of power in the international system and the position and security of the USA relative to its rivals.

Since international regimes reflect the interests of powerful states, due to the USA's hegemonic position, the Bush administration could repudiate the Kyoto Protocol when it did not serve its interests. Waltz (1993:18) reminds us that, "The nature and purposes of institutions change as structures vary." Likewise, US foreign policy under the Bush administration was marked by a turn from multilateralism to unilateralism (Skidmore, 2005:207). State behaviour can be traced to the structure of the international system, that is whether the structure is defined by a unipolar, bipolar or multipolar order and their position within this order. As the historical record indicates, the US coordination of multilateralism amongst states and international institutions has been a complex exercise (Skidmore, 2005). That is, while it was highly engaged in creating and coordinating multilateral institutions in the post-War era, as a hegemonic state, it was less likely to comply with the norms and principles of these institutions when these did not serve its interests (Skidmore, 2005). Rather, these institutions served as an expression of US power and hegemony, not its constraint (Skidmore, 2005). In the absence of the Cold War structure and the Soviet threat, a significant constraint on US power dissolved while its allies were less dependent on the US for security provision (Skidmore, 2005:224). The end of the Cold War and its bipolar order served as an important source of influence on US behaviour and its relations with its allies by making it "less willing to provide collective goods through strong international institutions" (Skidmore, 2005). Thereby, tension between the US and its allies increased since the US was less invested in multilateral institutions while its allies were more vocal in insisting that the US be bound to the same rules and norms that other states had to comply with (Skidmore, 2005). In this context, vested interests became more forceful in opposing multilateral agreements that undermined their interests, placing pressure on the executive not to ratify some of these agreements (Skidmore, 2005:224). The collective result was that under the Bush administration, US foreign policy was characterised more by hard power and less on the willingness of other states to comply with US leadership (Skidmore, 2005).

Within the above-mentioned context, the changing distribution of power in the international system reflected by the structural decline of the USA and the rise of developing countries within an increasingly multipolar[118] order during this era, influenced the Bush administration to repudiate the Kyoto Protocol since its asymmetrical design related to the exemption of developing nations and potentially negative consequences for the US economy, would

[118] There is some disagreement between scholars whether the 2000s were characterised by a unipolar or a multipolar distribution of power (Ikenberry, Mastanduno and Wohlforth, 2009:1).

undermine US power and security and thereby hegemonic position while advantaging and increasing the power of its rivals. Since US power in the international system was augmented through cheap fossil fuel prices by enhancing the competitive advantage of US industries in global trade, the negative implications for US competitiveness, a key component of US hegemony, meant that this fossil fuel dependence and low energy prices were advanced within the context of US structural decline in the international system and the need to maintain its hegemonic position (Tomain, 2007: 1203; Parker *et al*, 2011). Thereby, the Bush administration would favour an energy policy that centred around fossil fuels, and petroleum, to maintain the US position in relation to its rivals through cheap energy prices, the traditional concern of US energy policy (Klare and Volman, 2006:612; Minsk, 2017:5). Because of the trade-offs between these policy goals and the design of the Kyoto Protocol, the Bush administration would not support the Kyoto Protocol and as such the USA could rely on its hegemonic position to repudiate the Kyoto Protocol as it did not serve its interests within the era's particular configuration of power at both the domestic and structural levels (Mearsheimer, 1994-1995:7). There is link between economic strength and security in the international system. With the increased competition between the USA and developing nations within the distribution of power, the USA would not support the Kyoto Protocol as it undermined US power in the system. Since states have to rely on self-help in an anarchic international system, the USA had to advance those policies that were to enhance its security vis-à-vis its rivals in the international system while limiting its support for policies that did not serve its interests domestically or internationally.

6.3.2 Domestic Influences

In contrast to the international community, the Bush administration differed in two important respects in its stance towards the climate change regime. Firstly, the administration was sceptical towards the scientific consensus surrounding climate change and, secondly the administration questioned the use of multilateralism as a means of dealing with threats of a transnational nature (Depledge, 2005:11). George W. Bush did not always convey this antagonistic impression. During his 2000 campaign trail, Bush asserted that all power plants were to reduce their emissions under his presidency (Percival, 2014:140; Parenteau, 2004:366). It was thus anticipated that the Bush administration would make a concerted effort to reduce the USA's emissions (Percival, 2014:141). However, once in office, Bush distanced himself from this assertion seemingly due to antagonism from the conservative stream within the Republican Party (Percival, 2014:141). It further appears that US vice-president Dick

Cheney had great input into this policy reversal; and limited greatly the scope of involvement by both the EPA and State Department within the Bush administration's decision (Percival, 2014:141).

At the unit-level, the Bush administration's ideological predisposition alongside the influence of vested interests, were relevant factors that determined the Bush administration's position towards the climate change regime in an attempt to curb US structural decline and not give its competitors relative gains. In this regard, it does appear that the perception of policy-makers within this administration regarding the costs related to environmental regulation and its compatibility with economic growth, which were influenced by its ideological beliefs, appear to be instrumental in influencing policy outcomes towards climate change amid the particular domestic and international context present at the time (Lisowski, 2002:102; Depledge, 2005:19; Fisher, 2006:471). In particular, the fall back on ideology as a guiding principal proved to be an important factor for this repudiation rather than a well-considered policy design and consideration for the position of its allies (Depledge, 2005:19). Moreover, the Bush administration's close association with the fossil fuel industry is quite apparent and well-documented. This association is an important factor that influenced the Bush administration's position towards the Kyoto Protocol because it also influenced its ambition to enact a particular energy policy, one that was not compatible with the goals of the UNFCCC and Kyoto Protocol (Lisowski, 2002:112). Moreover, the Bush administration gave no indication within its energy policy that the USA would achieve the UNFCCC goal of reducing emission levels to 1990 levels (Parker *et al*. 2011:8).

The Bush administration favoured a domestic energy policy which endorsed the objective of an expansion of fossil fuel supply since it was considered important for economic growth - a dichotomy which could not be reconciled to a foreign policy which necessarily required a reduction in greenhouse gases emitted by the production and use of fossil fuels (Lisowski, 2002:112). This was already evident in 2001, when the Bush administration assembled an energy task force to oversee the establishment of an energy policy; however, from the very beginning the task force was biased towards fossil fuels (Lisowski, 2002:112). This is not surprising since George W. Bush and many members of his cabinet, including Vice-President Dick Cheney, had close connections to petroleum, automotive, aluminium and gas companies

(Lisowski, 2002:106)[119]. Hence, many of these individuals were connected to companies that would be negatively impacted by efforts to mitigate GHGs (Lisowski, 2002:106).

These material interests were also connected to this administration's particular position towards foreign policy (Lisowski, 2002:106). Unlike its predecessor, the Republican mandate of the "America First" approach to foreign policy was supported which was used to review existing treaties (Lisowski, 2002:106). Thus, anything that appeared to threaten the USA's hegemonic position in the global economy had to be forcefully handled (Lisowski, 2002:106 - 107). Depledge proposes that,

> "The extent to which the US administration misjudged the global mood over the Kyoto Protocol and placed itself in such isolation is very revealing of its overall attitude to international affairs. The US administration had truly assumed that, once the US withdrew, the Kyoto Process would collapse, either because action on climate change without US participation was unthinkable, or because countries that had been publicly supporting the Kyoto Protocol were doing so disingenuously, and would be gratefully relieved at the opportunity to reveal their true opposition to the treaty and follow the US lead in rejecting it." (Depledge, 2005:20).

The Bush administrations' decision[120] to repudiate the Kyoto Protocol appears to have been based on the domestic and international political constraints that were present at the time (Lisowski, 2002:102). At the federal level, domestic politics, that is the Senate's opposition to the ratification of the Kyoto Protocol, seems to have justified the Bush administration's antagonistic approach towards the negotiations (Lisowski, 2002:108). While the USA was not a party to the Kyoto Protocol, the Bush administration did implement a number of "new international technology cooperation agreements" that were more feasible in the domestic context of US politics (Pugh, 2015; Parker et al., 2011:7 - 8). Based on the administration's particular beliefs regarding both domestic and international constraints, the result of this is

[119] The CEO of Enron had garnered $21.3 million during a fundraising event during George W. Bush's bid for his first term in the presidency (Lisowski, 2002:106).

[120] Other explanations for this repudiation refer to the outcome of the breakdown of negotiations at COP 6 in The Hague which further underscored the idea that the Senate would not ratify any agreement, the Kyoto Protocol would prevent Bush from pursuing his energy policy domestically, and lastly Bush was personally antagonistic towards the Kyoto Protocol (Lisowski, 2002:101).

that under the Bush administration "three technologies were chosen for elevation to a political level" which allowed for the establishment of a new foundation for a technology-centric approach to deal with climate change, these being carbon-capture, hydrogen and nuclear technologies (Pugh, 2015).

Thereby, while the Bush administration repudiated the Kyoto Protocol, the administration nonetheless implemented certain measures to deal with climate change that were in line with their position that such actions need to be nationally determined. In a policy statement issued in June 2001, Bush articulated that the US approach to the climate change dilemma would be based on heightened scientific research, market mechanisms and voluntary actions (Justus and Fletcher, 2006:9). Although the Bush administration did not support a comprehensive climate change agreement and mandatory emission reduction standards; it did establish a number of partnerships regarding the implementation of a climate change strategy (Pugh, 2015). The Bush administration presented its alternative to the Kyoto Protocol, the Climate Change Initiative, in 2002 (Skodvin and Andresen, 2009; Centre for Climate and Energy Solutions, 2002). The Climate Change Initiative had as its objective an 18% reduction of the emissions intensity of the US economy by 2012 and consisted of four main programmes that were meant to achieve this (Skodvin and Andresen, 2009). Under this alternative programme, a voluntary greenhouse gas intensity[121] goal was put in place that elaborated existing voluntary programmes by "encouraging companies to voluntarily report and reduce their greenhouse gas emissions, and proposes increased federal funding for climate change science and technology development" (Centre for Climate and Energy Solutions, 2002). Essentially, this Initiative was based on a voluntary basis whereby technological development[122] was endorsed (Skodvin and Andresen, 2009). This programme expanded the Department of Energy's (DoE) existing voluntary reporting programme under which companies voluntarily submit data on their GHG reduction efforts (Centre for Climate and Energy Solutions,

[121] This is understood as "the ratio of greenhouse gas emissions (GHGs) to economic output expressed in gross domestic product (GDP) (Centre for Climate and Energy Solutions, 2002).

[122] The technology development focus of the Climate Change Initiative was geared towards the advancement of clean energy technology and "to make advanced energy technology commercially viable" (Skodvin and Andresen, 2009).

2002).[123] Another notable initiative endorsed by the administration was the National Climate Change Technology Initiative (NCCTI) and the Climate Change Research Initiative (CCRI) (Justus and Fletcher, 2006:9). Both these policies focused on short-term[124] policy goals related towards technology and scientific solutions towards climate change (Justus and Fletcher, 2006:9).

6.4 The USA's Position in the UNFCCC after 2005

Subsequent to its decision to repudiate the Kyoto Protocol, the Bush administration continued to hold a cautious position within the UNFCCC negotiations wherein after 2005, the negotiations concerning the mitigation of climate change were organised to determine the succeeding actions to be taken once the Kyoto Protocol's first commitment period expired in 2012 (Wirth, 2015:9; Dernbach and Altenburg, 2014:102). It was anticipated that such an agreement would be finalised at the Copenhagen climate summit in December 2009 (Wirth, 2015:9). In December 2005 at the eleventh Meeting of the COP of the UNFCCC (COP 11) and the first Meeting of the Parties to the Kyoto Protocol (MOP 1), developing countries as well as the United States opposed the idea of negotiating "new legally-binding commitments for the post-Kyoto (post-2012) period", while countries were hesitant to analyse new commitments for the post-Kyoto period if it did not include all major emitters such as India, China and also the United States (Fletcher and Parker, 2008: 7 – 8).

By 2007, climate change emerged as a critical issue on the international stage which required urgent attention and action from all nations. To reflect this urgency, the United Nations Security Council held its first debate regarding the potential relationship between climate change, security, energy and peace (Fletcher and Parker, 2008:20). In this context, negotiations got underway to determine the most appropriate approach to advance in order to mitigate climate change at the negotiations in Bali, Indonesia from the third to the fourteenth of December 2007 (Fletcher and Parker, 2008:20). In 2007, the USA's emissions peaked and

[123] Under this programme, companies are given broad discretion to determine the basis under which they calculate their emissions reduction targets and further companies are allowed to self-certify their input and no external verification of their submissions is required (Centre for Climate and Energy Solutions, 2002).

[124] Another notable attempt which focuses on long-term solutions is the US Global Change Research Programme (USGCRP) which endorses longitudinal scientific research and the Climate Change Technology Programme (CCTP) which likewise endorses climate change technology and Research and Development (R&D) (Justus and Fletcher, 2006:9).

in the same year China surpassed the United States as the biggest existing emitter of GHGs (Legget, 2014:2; Legget, 2011:1). The COP 13 and third meeting of the Parties to the Kyoto Protocol held in Bali, Indonesia adopted the Bali Action Plan which was "intended to launch intensive multilateral consultations scheduled to conclude with a comprehensive agreement at COP-15 in Copenhagen, Denmark, at the end of 2009" (Wirth, 2015:9). At the end of the negotiations, Parties were able to reach some sort of a compromise and produced the Bali Action Plan, under which two negotiating tracks were established (Wirth, 2015:9; Fletcher and Parker, 2008:8).

The negotiating track of the Ad Hoc Group on Further Commitments under the Kyoto Protocol (AWG-KP) aimed to adopt new binding mitigation commitments for Annex I, or developed, countries for the post-2012 period (Wirth, 2015:9; Leggett, 2010). The Ad-Hoc Working Group on Long-Term Cooperative Action under the Convention (AWG-LCA) focused on negotiations under the Framework Convention which included all Parties to the Convention (Wirth, 2015:9). This second negotiation track proceeds in tandem with the AWG-KP (Leggett, 2010). The Bali Action Plan consisted of four main elements: (i) mitigation of climate change; (ii) adaptation to the impacts of climate change; (iii) financial assistance; and (iv) technology development and transfer (Fletcher and Parker, 2008:9). Under the circumstances, it was understood that both developed as well as developing nations would need to accept measures to mitigate climate change after 2012 (Fletcher and Parker, 2008:9).

The United States was once again viewed as having an obstructionist position during the Bali negotiations[125] (Ivanova and Esty, 2008:58). At the negotiations, the United States position was characterised by its refusal to accept binding emission reduction targets and under these circumstances the progress needed to advance mandatory emission reductions would be stalled until a more progressive administration would be willing to enter into negotiations in 2009 (Fletcher and Parker, 2008:20). The Bush administration has been characterised by a pursuit of unilateralism towards security issues, a position that has likewise been evident in its position towards environmental issues (Ivanova and Esty, 2008:58). The real question is has the United States lost its influence in the UNFCCC? This was a major issue since other

[125] As a diplomatic first, the US delegation was actually booed when it obstructed the emerging Bali consensus (Ivanova and Esty, 2008:58).

nations were willing to proceed with the negotiations in spite of the absence of the United States therein (Ivanova and Esty, 2008:58).

6.5 Linking the USA's Energy Policy and Position within the UNFCCC

The presidency of the George W. Bush administration occurred during a period of instability in energy markets with the California energy crisis, increased demand from developing countries, steep increases in energy prices and the USA's dependence on petroleum imports surpassing fifty percent of consumption in 1998. Within this context, certain policy goals were promoted in reaction to the constraints and incentives presented by the international and domestic systems in an attempt to maintain low energy prices for US economic well-being. In response to these challenges, the Bush administration would issue the report of the National Energy Policy Development Group in 2001 and the Energy Policy Act of 2005 (EPACT2005) which were primarily focused on the USA's energy security and dependence on foreign petroleum. These policies placed an emphasis on increasing fossil fuel production to meet these challenges (Lisowski, 2002:112).

At the structural level, since the Bush administration was concerned about US structural decline and the rise of rivals that challenged US hegemony in an anarchic international system, the policy goal of climate change mitigation would become a peripheral issue due to policy-makers' concerns over the perceived costs of such actions and the perceived trade-offs with the afore-mentioned goals. This would further influence the administration to emphasise low cost fossil fuel energy to enhance the USA's economy, and thereby hegemony, in relation to the ascent of emerging economies in the international system. Given the challenges faced by this administration, these goals were perceived by policy-makers within this administration as incompatible with one another in the attempt to augment US power and security, as well as maintain its hegemonic position relative to its rivals. Since the cheap supply of fossil fuels was a source of comparative advantage for the USA, the risks to its energy security and the perceived costs of mitigation increased the administration's resistance towards environmental regulation and climate change mitigation.

The Bush administration's energy policy would be impacted at the structural level by the increasingly multipolar distribution of power in the international system and the USA's relative hegemonic decline therein (Eichengreen, 2011; Cox, 2012:369; Gaiser and Kovacˇ, 2012:59). Thus while the unipolar distribution of power and stable energy markets in the 1990s proved favourable to US interests during this era, this multipolar distribution of power

was made more challenging within the context of the energy challenges facing the USA at the time, which made energy security and economic growth key policy goals (Klare and Volman, 2006:612; Chanlett-Avery, 2005:1, 11; Gaiser and Kovacˇ, 2012:52, 59). With the rise of emerging economies in the distribution of power, interstate competition increased and the USA strove to maintain and enhance its hegemonic position within the anarchic international system. To enhance US power, domestic production of low cost fossil fuels was promoted as historically this was an important aspect of the USA's hegemony through the enhancement of its economic growth and strength (Eckersley, 2007:317; Parker *et al.*, 2011:7). Since economic growth and energy security were integral for US power and security in a competitive, anarchic system, the reliance on the production of cheap fossil fuels at the expense of other policy goals such as environmental regulation were promoted to enhance the USA's hegemonic position, thus emphasising the link between fossil fuel production and power in the international system as a means of promoting US self-help (Eckersley, 2007:317; Lisowski, 2002:109).

At the federal level, the Bush administration's energy policy can be linked to other crucial influences these being ideology, vested interests, and the structure of the US political system. The Republican Bush administration's ideological position predisposed it to limit federal involvement in energy markets and environmental regulation (Percival, 2014:141; Pugh, 2015). Rather, market mechanisms and voluntary actions were promoted to meet the challenge of climate change (Pugh, 2015; Parker *et al.*, 2011:7). Under such circumstances, the Bush administration chose to pursue a more aggressive energy policy grounded in its ideological predisposition that was centred on a pro-production focus based on fossil fuels (Percival, 2014:141; Lisowski, 2002:102). Thus, US energy policy would reflect an emphasis on energy security and the production of fossil fuels, while environmental regulation proved to be a peripheral goal since policy-makers in this administration perceived economic growth and environmental regulation as incompatible because of the perceived costs that would be accrued to US energy prices and the negative consequences for the US economy (Volman, 2003:573; Klare and Volman, 2006:612; IEA, 2007:9; Klare(b), 2004:396). The incursion of vested interests both within and outside the administration would further predispose the administration to place emphasis on a strategy that hinged on increased fossil fuel production (Percival, 2014:141). In the US federal system, Congressional opposition would limit the administration's ability to pursue all of its policy goals, especially in so far as decreased environmental regulation was concerned as the restrictions on petroleum exploration in the

ANWR would demonstrate (Gerth, 2005; Rinfret and Pautz, 2019:300). Yet, in the September eleventh context, the Bush administration could make use of a number of executive actions to push through their policy goals reflecting a complex relationship between Congress and the executive during this era at the federal level (Rinfret and Pautz, 2019:300). Moreover, Congressional inaction and continuous debate as well as division prevented the design of a comprehensive energy policy (Bush, 2005).

This would have implications for the USA's position in the UNFCCC. The Republican administration of George W. Bush had a cautious approach to both the UNFCCC and the Kyoto Protocol (Depledge, 2005:11; Parenteau, 2004:363). The historical context during which this occurred was an important attribute to this position. With the changing distribution of power, the Bush administration indicated its opposition to the Kyoto Protocol on the basis that it would have negative consequences for the US economy and because it exempted developing nations (Lisowski, 2002: 101, 107; Eckersley, 2007:311, 315). Thus, the implications for the USA's hierarchic position and the relative gains attained by developing nations were important structural considerations, especially when considered alongside the mandate of the Byrd-Hagel Resolution. Therefore, at the structural level, US cooperation was limited because of the consideration of relative gains to developing nations alongside the distribution of costs across and within states.

At the structural level, the Bush administration pursued such a foreign policy since it was threatened by US structural decline and the rise of China and other emerging economies, and the USA's increasing energy insecurity after the abundance of the 1990s (Lisowski, 2002:109; Eckersley, 2007:317). This can be traced to the altering distribution of power in the international system in respect to the 1990s. By the early 2000s, a shift was discernible in the international system with a devolution of power from the West to the East thus altering the distribution of power in the international system (Eichengreen, 2011; Cox, 2012:369). Rather than the unipolar world order of the early 1990s, the 2000s were characterised by a multipolar international system (Eichengreen, 2011). Since fossil fuels, especially petroleum, were an important building block of US power and hegemony, the Bush administration wanted US energy policy to focus on increased production of fossil fuels to maintain US security and power in an anarchic international system – a stance that was incompatible with the design of the Kyoto Protocol (Eckersley, 2007:117; Lisowski, 2002:107). Moreover, this occurred with the threat of increased demand for energy from China and other developing countries which further threatened the USA's hegemonic position (Klare and Volman,

2006:612; Chanlett-Avery, 2005:1, 11). As has been highlighted in this chapter, to enhance US power, policy-makers within the Bush administration thus chose a policy design consisting of increased fossil fuel production, the free market and a reliance on technology to mitigate climate change in order to minimise the perceived costs to the US economy, and thereby not threaten the USA's hegemonic position, policy goals which were incompatible with the demands of the Kyoto Protocol and the UNFCCC. Since the Kyoto Protocol did not serve the interests of the USA, the USA could rely on its hegemonic position to repudiate the Kyoto Protocol. Multilateral institutions will reflect the interests of powerful states.

At the federal level, Congressional opposition in the Byrd-Hagel Resolution of 1997 made it evident that it will not support the Kyoto Protocol on the grounds that it would harm the US economy, and its exemption of developing nations which the Bush administration used as a pretext to not support the Kyoto Protocol (Lisowski, 2002:107). Within this domestic context, this was combined with the Bush administration's ideological predisposition along with the intrusion of vested interests which influenced the Bush administration's stance towards US energy policy, the mitigation of climate change and the Kyoto Protocol in the midst of concerns over the costs to US energy (Parker et al., 2011:13; Leggett, 2011:3). Moreover, the Bush administration's foreign policy position was influenced by the Republican party's "America First" mandate along with the perception that economic growth and environmental regulation were incompatible (Lisowski, 2002:106; Parker *et al*., 2011). To deal with climate change, the Bush administration implemented technology cooperation agreements along with voluntary and nationally determined actions which were more feasible in the domestic context of US politics (Pugh, 2015; Lisowski, 2002:102; Parker *et al.*, 2011:7 - 8).

The impact of the international system was filtered through the influence of ideology and vested interests within the US federal system during the Bush administration. The Bush administration thus favoured pro-production and energy security goals within its energy policy as these goals were perceived by this administration to be central to maintaining low energy prices, which were central to US competitiveness and hegemony, within the challenges presented by this particular era to US power and security relative to its rivals (Parker *et al.,* 2011:7 - 8; Eckersley, 2007:317). The federal structure of the US political system would influence the maintenance of low energy prices and limit support, to a degree, for environmental protection, but especially climate change mitigation. Within the changing distribution of power, the USA would not support the Kyoto Protocol as its goals were incompatible with the goals of the Bush administration's favoured energy policy, a situation

made more acute by the changing distribution of power, and the concern for US power relative to its rivals therein in the midst of growing competition for scarce resources (Lisowski, 2002:109; Chanlett-Avery, 2005:1, 11). The USA could thus rely on its hegemonic position to maintain the central goals of its energy policy while choosing to not support the Kyoto Protocol. Ideological predisposition and the influence of vested interests resulted in a particular energy policy that was incompatible with the Kyoto Protocol (Lisowski, 2002:102; Depledge, 2005:19; Fisher, 2006:471; Parker et al., 2011:13; Leggett, 2011:3). With the increased competition of developing nations, in an increasingly multipolar distribution of power, these influences were augmented to permit the Bush administration to pursue its preferred energy policy while not supporting a regime that did not serve US interests. This was augmented by the notion that this would maintain low energy costs which was embedded within the federal structure of the US political system. Within this context, Congress did not support the Kyoto Protocol as it was deemed to give developing countries an unfair advantage while undermining the US economy by raising the costs of energy (Lisowski, 2002:107; Depledge, 2005:19; Parker et al., 2011:7).

6.6 Conclusion

After the relative market stability of the 1990s, the 2000s would present a set of multi-faceted issues to decision-makers that shirked a straightforward solution as US dependency on foreign petroleum reached unprecedented levels and its energy security was undermined by increased demand from developing countries and rising energy prices, while there was international and domestic pressure to mitigate climate change. The Bush administration would attempt to meet these challenges by developing an energy policy that centred on increased production of fossil fuels, a decision that would prove imprudent since it would make the USA even more dependent on foreign petroleum suppliers. Ideology and the intrusion of vested interests would play a part in influencing this policy design while negating support for environmental regulation since the costs of such actions would have negative consequences for the US economy. Due to the threat of rivals in the international system alongside these influences, the Bush administration would choose to not support the Kyoto Protocol since it negated its main energy strategy and imposed unacceptable costs to the US economy while providing its rivals with relative gains.

The George W. Bush administration was characterised by a shift in US foreign policy. Its reliance on unilateralism rather than multilateralism towards various issues arose out of the

confluence of a multifaceted set of issues present at the time. It is perhaps unfair to judge this administration as the sole product of ideological malpractice and the incursion of vested interests. Given the strenuous set of circumstances facing decision-makers at the time both at the international and domestic levels, the attempt to design a pragmatic energy and foreign policy was a highly incoherent task.

Chapter 7

The Obama Administration (2009 - 2015): Energy Policy, Climate Change and the UNFCCC

7.1 Introduction

In some respects, the Obama administration's energy policy entailed a continuity of previous administrations' energy policies with a focus on a pro-production strategy and the promotion of private sector initiatives in the energy sector. His administration was marked by two major differences: its efforts to integrate environmental protection, especially that of a low carbon future, into energy policy, and its use of executive actions to achieve its particular goals. Obama's presidency can be further distinguished into two periods. During the first presidential term, the focus was on the global financial crisis (GFC), climate change, and finding a nexus between the two for their resolution. Although Congress supported the American Recovery and Reinvestment Act of 2009 which included measures for renewable energy deployment, it showed less support for cap-and-trade legislation citing concern regarding asymmetrical climate policies in China. Since Congress did not pass this legislation, it limited what the Obama administration could feasibly accomplish to reduce emissions and take a strong position at the UNFCCC negotiations during the Copenhagen negotiations in 2009. These interactions must also be situated within an evolving historical context. While the EU and USA have traditionally been viewed as the dominant players in the global climate change negotiations; with the presidency of Barack Obama, this period saw the ascent of emerging economies such as China, India and Brazil who began to exert influence over the scope of the negotiations (Parker *et al.*, 2014:8).

During the Obama administration's second term in office, the transformation in the US energy sector had important implications for US energy policy and its position in the UNFCCC. Because of the USA's increased production of shale gas, the increased energy security and the creation of new economic opportunities helped decrease the costs to the US economy of mitigating climate change thereby changing the hierarchy of policy goals and the costs of different policy designs after forty years (CAR, 2016:7). Per consequence, the Obama administration could rely on executive orders, the Climate Action Plan (CAP) and Clean Power Plan (CPP), which were paramount in meeting its domestic and international goals. With these changes set in place, the Obama administration was instrumental in

securing the Paris Agreement, representing an important turning point in the history of the UNFCCC. This chapter traces on overview of the Obama administration's energy policy and its interactions with its position in the UNFCCC and specifically focuses on analysing the Copenhagen Accord (2009), and the Paris Agreement (2015).

7.2 The Obama Administration's Energy Policy 2009 – 2013

An energy policy emerges in reaction to and as a reflection of a particular set of circumstances (Helm, 2005:1). In 2008, energy-related activities accounted for 86% of US GHG emissions, 18% higher than when climate change first reached the political agenda during Congressional hearings in 1988 (Parker *et al.*, 2011:1). Analysts also assumed that US dependence on petroleum imports would persist for decades, while the USA experienced its worst recession in years which caused the price of energy to decrease (De Jong *et al.*, 2010: 221). In 2008, a report published by the Pacific Northwest National Laboratory for the US Department of Energy cautioned that,

> "Scientific evidence indicates that major decarbonisation of the world's energy system is necessary to avoid irreversible climate change…This outcome must be achieved in the face of a vast carbon-based infrastructure in the developed world that cannot be constrained overnight compounded by continued unprecedented growth of carbon-based energy in the developing world. Crafting climate legislation is perhaps one of the most difficult challenges facing Congress. Effective policy must balance the drive for action on carbon dioxide emissions with measures to minimise the cost that is inherent in moving the energy foundation of the US economy away from free venting of carbon emissions. Economically transitioning from a fossil-based economy to an energy economy where non-emitting sources provide significant portions of energy demand will take decades."

While the USA's energy policy rests on a number of assumptions, this policy framework has for decades centred around the tension between economic growth and environmental protection. Briefly, up to the 1970s, US energy policy rested on three economic assumptions: competition rather than government regulation promotes the efficient working of energy markets; there is a correlation between energy production and economic productivity, therefore the more energy is produced and consumed, the stronger the economy will be; and,

economies of scale are needed to produce the largest quantity of energy at the lowest cost to ensure economic strength. Since the 1970s, these assumptions have been contested by the energy crises and environmental degradation related to energy production and use. This created two opposing ideational frameworks related to the assumptions on which energy policy should be based: one that assumes that economic growth and environmental regulation can be compatible given the right policy instruments; and one that views these two goals as incompatible due to the perception of the higher costs that environmental regulation will incur (Jaffe *et al.*, 1995:133). Controversy further surrounded the role of government and regulation, the redistribution of income and costs, and the attainment and mix of energy sources.

Before their election to office, candidates Obama and Biden put forward a *New Energy for America* plan which intended to establish an economy-wide cap-and-trade programme to reduce emissions by 80% by 2050 as well as set up a National Low Carbon Fuel Standard in order to accelerate the use of low carbon non-petroleum fuels (Parker *et al.*, 2011:10). A re-engagement with the UNFCCC was also a strong aspect of their agenda as candidates (Parker *et al.*, 2011:10). However, in 2009, the United States experienced the worst economic crisis[126] since the Great Depression of the 1930s (Collina and Poff, 2009:1; Council of Economic Advisers, 2014:i). While the two issues that Obama addressed during his election campaign were the United States' petroleum dependence, and climate change; in the aftermath of the recession, it seemed unlikely that Obama would push for a progressive energy and climate policy that could achieve these goals (Collina and Poff, 2009:1; Holden, 2009:410).

In spite of these misgivings, on the 17th of February 2009, the American Recovery and Reinvestment Act of 2009 (otherwise known as the *Recovery Act*) was signed into law by President Obama to link energy and economic recovery but in the midst of new trends and policy goals (Council of Economic Advisers, 2014:2; Collina and Poff, 2009:2). The Obama administration proposed the Recovery Act as a means to manage the economic crisis, energy, and climate change simultaneously - a clean energy economy framework that would simultaneously enhance economic recovery while mitigating climate change, thus attempting to combine two goals that historically were viewed as incompatible (Stanislaw, 2009;

[126] Economic output that is measured by gross domestic product (GDP) was at its worst decline since the end of the Second World War (Council of Economic Advisers, 2014:2).

Holden, 2009:414). Such a deal essentially consisted of three goals: improve the country's national security, "build the foundation for a twenty first-century economy", and advance America's global leadership all of which are essential for its hegemony (Stanislaw, 2009). The key difference within this framework was that support for renewable energy was seen as a means to generate jobs and establish the foundation for a low carbon economy to alleviate the effects of the crisis (Collina and Poff, 2009:1; Selin and VanDeveer, 2011:121; Parker *et al.*, 2014:8).

The Stimulus - the largest in US history - provided $787 billion towards economic revival "through federal spending and investment in everything from education and welfare to infrastructure to unemployment benefits." (Collina and Poff, 2009:2). Unlike previous policies, the stimulus was framed as specifically *green* with $120 billion of the $787 billion designed as a strategic stimulus investment in clean energy "in the form of direct spending and tax credits" set aside for projects that would focus on environmental initiatives such as energy efficiency, environmental improvement, clean and renewable energy and green transportation to promote Obama's particular energy and climate objectives (Collina and Poff, 2009:2; Aldy, 2012:2). The American Recovery and Reinvestment Act's Clean Energy Package was based on "short-term supply-side support for clean energy technologies" which was intended to reduce GHG emissions and the dependence on petroleum (Aldy, 2012:2). This was intended to increase support for the recommended economy-wide cap-and-trade regime to reduce GHG emissions by more than 80% by 2050 (Aldy, 2012:2).

Aside from these legislative efforts, at the start of the decade, there have been a number of factors to negatively influence global energy markets. On the geopolitical front, one of the most prominent disturbances for the energy market had been the Arab Spring uprisings which began in December 2010 and spread across the Middle East and North Africa (MENA) region raising fears over the reliability of petroleum supplies from the region (El-Katiri *et al*., 2014:1; Calabrese, 2014:1). While petroleum prices initially decreased in the wake of the global financial crisis of 2008, the effects of the Arab Spring and the accelerated demand from developing countries once again caused instability in the global energy market and thus raised concerns about energy security (Houser and Mohan, 2011:1; El-Katiri *et al.*, 2014:1). Because the petroleum market is global in nature, disruptions in the Middle East have ripple effects throughout the rest of the world and had profound implications for global petroleum prices (Calabrese, 2014:1).

Although the United States began to experience some economic recovery at the end of 2010, political unrest in Libya caused an interruption of petroleum exports to Europe causing petroleum prices to spike again (Ratner and Glover, 2014:16). There was a brief respite while prices stabilised, however they soon increased again because of an Iranian supply disruption due to international tension regarding its nuclear programme provoking American and European sanctions against its petroleum exports (Ratner and Glover, 2014:16; El-Katiri *et al.*, 2014:8). Although dependence on Middle Eastern petroleum was initially reduced in the wake of the global financial crisis, by 2011 it was forecasted that this dependence was once again set to increase (Yergin, 2011). This realisation ensured that energy security once again became a top policy priority amid concerns over the impact that rising petroleum prices would have on the fragile global economic recovery (Houser and Mohan, 2011:1; El-Katiri *et al.*, 2014:2).

7.2.1 Structural Influences

The Obama administration's energy policy consisted of a continuation of many of the previous administrations' policy goals, but these were framed differently in light of the new challenges facing this administration. To situate this structurally, in an international system that is competitive and anarchic but uncertain, states compete against one another but still have to design policies that suit their particular economic and political context. States will also respond to the changing distribution of power in the anarchic international system which influences their policies. Since the 1970s, US administrations drew a link between energy and economic recovery and strength in their policies in order to attain power and maintain the USA's hegemonic position in relation to other states.

Consequently, the Obama administration's energy policy, much like any US energy policy, cannot be understood apart from the USA's hegemonic position within the international distribution of power. Per consequence, these developments need to be situated within evolving trends at the international level. As such, the Obama administration's energy policy was characterised by two aspects at the structural level: competition with China in regards to the manufacture of and inclusion of targets related to renewable energy, and the enhancement of the USA's hegemonic position after the economic recession of 2008.

At the start of 2009, energy policy received resurged interest under the new administration as a means to meet the challenge of increased competition from East Asia as a number of these countries were manufacturing renewable energy technologies including energy research and

technology development, as well as the inclusion of ambitious targets (Stanislaw, 2009). This trend became a source of concern, as the United States was seen to be outmoded in its lack of support for these industries[127] in the midst of altering trends at the international level and the USA's dwindling position therein (Stanislaw, 2009). Certain analysts argued that "The first country to mass-produce cost-competitive wind turbines, solar panels and electric vehicles will dominate the market for those technologies and reap the job creation benefits." (Collina and Poff, 2009:2). To attain this niche, an important aspect of the Stimulus Plan[128] had been its emphasis on renewable energy with the Plan accelerating funding toward solar, geothermal and wind energy (Holden, 2009:405; Council of Economic Advisers, 2014:iv). Obama has firmly stated that, "We all know that the country that harnesses this energy will lead the 21st century. Yet we have allowed other countries to outpace us in this race to the future…I do not accept a future where the jobs and industries of tomorrow take root beyond our borders. It is time for America to lead again…That's how we can grow this economy, enhance our security, and protect our planet at the same time." (Holden, 2009:406; Obama, 2009). This also became a Congressional concern, and on the 10th of June, the majority of Senators voted against a climate change treaty that could potentially undermine "the intellectual property rights of American green technology" (Stanislaw, 2009). Within the evolving trends at the international level driven by economic and technological change, the Obama administration sought to maintain the USA's hegemonic position and enhance US leadership in the international system through its support of these technologies. Support for these technologies was further based on the need to compete against its rivals and in order to not undermine the USA's latent power nor to allow the USA to lag behind its rivals. Moreover, in an anarchic international system where states have to rely on self-help, enhancing the USA's support for these technologies in response to its rivals was intended to not undermine the USA's security relative to its rivals.

Hence, in an anarchic international system, technological change intensifies international competition. To quote Obama from Stanislaw (2009:3), "It is China that has launched the largest effort in history to make its economy energy efficient…In the years to come, I hope that America will be selling clean technology to China and India and not the other way

[127] For instance, at the time, only a quarter of renewable energy companies were American in origin (Ladislaw, 2009:3). Compare this to the seven sisters which dominated the petroleum market until the 1970s.

[128] Obama stipulated that, "the investments we made in the Recovery Act will double the nation's supply of renewable energy in the next three years." (Holden, 2009:406).

around." Therewith, the US focus on renewable energy production and export has an additional aim of improving its latent power in the international system. Per consequence, the strengthening political clout of the emerging economies, alongside their bigger R&D budgets and centralised economies had influenced the Obama administration at the start of 2009 to pursue a more environmentally-sensitive energy policy (Stanislaw, 2009:3; Murray *et al.*, 2011:6).

The international system is characterised by increasing competition between the United States and China for influence therein as the distribution of power has been shifted to reflect China's growing power and influence *vis-à-vis* the USA. The nature of this competition is however complex. China and the United States are the world's two largest emitters (Seligsohn *et al.*, 2009:2). While its emissions have increased, China has introduced a number of policy goals in light of the climate change challenge (Seligsohn *et al.*, 2009:2). Its energy mix has increased the number of non-fossil fuel energy sources and greater energy efficiency measures have also been introduced. For instance China[129], currently the world's second largest economy, has issued ambitious targets toward the development of renewable energy sources encompassed in policies and legislation to have been issued (Campbell, 2014; Murray et al., 2011:5). There are thus two elements to this competition, on the one hand China poses an economic challenge to the United States as the USA's competitiveness is potentially weakened in relation to China, and secondly, China's changing energy profile introduces pressure on the USA to do likewise. With the changing distribution of power due to the ascent of China, the Obama administration has responded by recognising the trends pursued by its rival and ensuring that the USA does not lag behind. As the distribution of power is changing, the USA will be increasingly concerned with its security and power in an anarchic international system and thus emphasising those technologies that will allow it to compete and increase its power and security in relation to other states.

The international system was changing in terms of its structure and trends making it increasingly difficult to reconcile the ideas associated with energy policy with the historical context (Helm, 2005:1). This catalysed the administration to seek new measures to address

[129] Since the 1980s, the Chinese economy has grown rapidly with its gross domestic product (GDP) having grown by approximately 9.8 % annually (Campbell, 2014). Its economic growth has seen increased demand for energy with Chinese electric power generation capacity increasing from 66 Gigawatts (GW) in 1980 to 2011's 1100 GW – at the time coal fuelled approximately 66% of this generation (Campbell, 2014). A key policy driver has been the abatement of air pollution caused by coal-based electric power generation (Campbell, 2014).

the economic downturn as well as increased competition from other countries while repositioning US leadership in the international system. It is thus optimal to consider the drivers of US energy policy as a combination of external and internal pressures which have led to the adoption of such goals (Waltz, 1993:50).

The international system is marked by the rise and fall of great powers. Technological and economic alterations produce new areas of wealth and power accumulation leading to competition amongst great powers for ascent in the anarchic international system since "great-power status cannot be maintained without a certain economic capability" (Moe, 2009:204 - 205; Waltz, 1993:45, 50). Countries thus need to keep pace with technological and economic trends if they are to retain their power and security (Waltz, 1993:50 - 51). Moe (2007:3) asserts that, "…industrial leadership is inextricably linked to *technological* leadership. Countries that have mastered the core technologies of a particular historical era, and have been successful in setting up industries based on these technologies, are the ones that have forged ahead, grown in power and stature." From a historical perspective, each industrial era has corresponded to the exploitation of a new energy resource leading to structural economic change and the creation of new industries (Moe, 2010:1730).

As part of its strategy to attain these objectives, the Obama administration outlined in the Blueprint for a Secure Energy Future released in 2011 that it intends to lead the world in clean energy as a means to strengthen the US economy (Blueprint for a Secure Energy Future, 2011:3 – 4; Murray et al., 2011:4). Using Imperial language resonant of the *Great Game* of the nineteenth century, the Blueprint states that, "A global race is underway to develop and manufacture clean energy technologies, and China and other countries are playing to win." (Blueprint for a Secure Energy Future, 2011:6). By developing and manufacturing "cutting-edge clean energy technologies" the USA will position itself as a global leader in the sector (Blueprint for a Secure Energy Future, 2011:7). That is the stark scenario that the Blueprint alludes to "Less than thirty years ago, the United States boasted more than 80 percent of the world's wind capacity, and 90 percent of its solar capacity. We invented the photovoltaic solar panel, built the first megawatt-sized solar power station, and installed the first megawatt-sized wind turbine. Yet today, China has moved past us in wind capacity, while Germany leads the world in solar." (Blueprint for a Secure Energy Future, 2011:32).

In a number of ways, the Blueprint for a Secure Energy Future is very similar to the energy policies of previous administrations. It has a pro-production focus and alludes to energy efficiency, alternative fuels and market instruments. Climate change is alluded to as one of the challenges that US policy must address yet the main focus of the plan is on the cost and security of energy, and climate change as a means to meet these two challenges. Yet, it is also different. In contrast to previous administrations, this policy specifically focuses on a clean energy economy and its future importance. Therewith, the Obama administration focused on clean energy technology as a means to position the USA in this new economic framework and the threat posed by China to the USA's position therein. The USA played a key role in the petroleum system of the twentieth century and the Obama administration is re-positioning US hegemony to play this part in the twenty-first century renewable energy technology and economy. Nevertheless, Congressional opposition would continue to dominate the direction of US energy policy with consequences for a number of policy areas and the position of the USA in the climate change negotiations. Although the Obama administration began to re-frame US energy policy, a number of impediments still remained.

Moreover, in the wake of the recession US energy policy had to reinvigorate and maintain the USA's hegemonic position by strengthening its economy. Although it appeared unlikely that the Obama administration would be able to pursue a progressive energy policy, it nonetheless was able to articulate a link between energy and economic recovery to enhance the USA's hegemonic position to overcome the effects of the recession however within a new context (Collina and Poff, 2009:1; Holden, 2009:410; Council of Economic Advisers, 2014:2; Collina and Poff, 2009: 2). Since there is a link between the cost of energy and economic strength within the historical development of US energy policy, such a policy framework was necessary to enhance the USA's power and security within an anarchic international system, however the necessity of enhancing the USA's economy was developed by linking the economic crisis, energy, and climate change concurrently within new economic and technological trends especially related to the mitigation of climate change and the enhancement of the USA's leadership in this area.

The Obama administration's energy policy needs to be situated historically with the goals developed by this administration being based upon the need to secure energy and economic recovery and strength, thus reflecting a historical continuity with previous administrations. Within this context, the USA's energy policy must ultimately be seen as a reflection of its hegemonic position within the distribution of power within the international system. The

need to compete with its rivals, especially in East Asia, increased the focus on the goal of producing renewable energy technologies (Murray et al., 2011:1- 2, 5; Heussner, 2010). These competitive dynamics were reflecting the changing distribution of power as the USA increasingly sought to secure a relative advantage in relation to its competitors and enhance its power. Linking these goals to the strengthening of its hegemonic position especially after the recession influenced the emphasis on clean energy as a means to strengthen the US economy within the international system and to prevent China from gaining a comparative advantage over the USA within the distribution of power (Minsk, 2017:5; Heussner, 2010). While the goals of US energy policy remain focussed on the cost and security of energy as these have historically been integral to the competitiveness of the USA and thereby its hegemony, climate change mitigation was introduced as a means to meet these two challenges (Minsk, 2017:5; Tomain, 2007:1203). To maintain the US hegemonic position, there was an emphasis placed on renewable energy technology and the economy, which would also permit the USA's hegemonic position to influence trends in these areas, much like in previous eras (Minsk, 2017:5; Heussner, 2010; Collina and Poff, 2009:2).

Therefore, with the distribution of power in the international system reflecting the increasing competition between the United States and China for influence therein, the administration was driven to seek new goals to address the economic downturn as well as increased competition from other countries while repositioning US leadership in the international system (Minsk, 2017:5; Heussner, 2010; Stanislaw, 2009). This was intended to enhance US hegemony, especially as there was renewed pressure on the USA to keep up with technological and economic trends if it were to enhance its power and security, and thereby its hegemonic position within the distribution of power (Stanislaw, 2009; Heussner, 2010). Since US hegemony depends in many respects on its economic strength, the policy goals introduced by the Obama administration were meant to strengthen the US economy and thereby power and security within the altered distribution of power.

7.2.2 Domestic Influences

The international system presents policy-makers with a set of opportunities and threats while simultaneously, within this uncertain context, policy-makers must also develop policies to suit their domestic context requiring that these actors have to navigate between a complex two-level game (Taliaferro *et al.*, 2009:7). The Democratic Obama administration made the focus on renewable energy and the mitigation of climate change key aspects of its energy

policy at the start of this administration due to these policy-makers' perception that the policy goals of environmental regulation and economic growth were compatible, wherein managing the economic crisis, energy and climate change as a means to enhance economic recovery while simultaneously mitigating climate change were advanced (White House, s.a.:1; Obama White House, 2016:11; Office of the President, 2016:3; Minsk, 2017:5; Silverstein, 2016). At the federal level, at the outset of the Obama administration's first presidential term, both houses had a Democratic majority, during his "first address of a joint session of Congress", Obama "called for enactment of legislation creating a comprehensive national programme to control emissions of GHGs." (Percival, 2014:143). During the first session of the 111th Congress, the Democratic-controlled House passed H.R. 2454, the *American Clean Energy and Security Act* (ACES, otherwise known as the Waxman-Markey Bill) in June 2009 which was a bill set to take into account a number of climate change as well as energy related issues (Parker *et al.*, 2011:10; Dernbach and Altenburg, 2014:103; Freed and Fitzpatrick, 2012:3). It was hoped that the bill[130] would have altered the Clean Air Act to create a cap-and-trade system that would have *in theory* limited emissions "by 19 percent below 2005 levels by 2020 and 83 percent below 2005 levels by 2050" which was set to start in 2012 (Parker *et al.*, 2011:10; Dernbach and Altenburg, 2014:103). The bill was also meant to promote energy efficiency as well as renewable energy requirements, create a national carbon sequestration strategy, and "required EPA to set GHG emissions standards for various sources" (Dernbach and Altenburg, 2014:104; Parker *et al.*, 2011:10). To quote Dernbach and Altenburg, "The bill, in short, would have employed a wide-variety of approaches to climate change; it was not simply cap-and-trade legislation." (2014:104).

However, while the Obama administration had a particular policy framework that it attempted to enact, the Congressional input therein play a key role in the kind of policy that was developed and the extent to which the Obama administration could meet its goals. Hence, in the midst of this initial enthusiasm, these efforts that were promoted at the start of 2009 were soon to meet serious opposition at the federal level in Congress (Goldenberg, 2012; (Reardon, 2016:387). Numerous opponents to climate change-related legislation and "climate change control programs" emphasised arguments related to the high costs associated

[130] Besides this bill, another considerable effort was the American Clean Energy Leadership Act which was intended to become a comprehensive bill that would have included "renewable energy requirements for electric utilities" although it still precluded "a mandatory GHG control program" (Parker *et al.*, 2011:11).

with such programmes and measures, which was made more challenging by the difficulty to determine the potential costs associated with the programme, the threats and disadvantages that this posed to the competitiveness of US industries, the alleged complex nature of the legislation, as well as the growing emissions of developing countries, notably China (which surpassed the United States as the world's biggest emitter of GHGs in about 2005), opposition from vested interests, Republican accusations that it was a regulatory system akin to a tax that would undermine efforts to ameliorate the recession, the influence of the Tea Party movement, a weak economic environment, and disbelief in the basic assumptions of climate science diminished support for this legislation at the federal level (Parker *et al.*, 2011:11, 12; Dernbach and Altenburg, 2014:104; Freed and Fitzpatrick, 2012:3; Osofsky, 2011:244; Sussman, 2015). These opponents likewise pointed out that due to the accelerated rise in emissions originating in developing nations, unless a global climate change policy is sufficiently comprehensive, it will unlikely curb anthropogenic climate change (Parker *et al.*, 2011:11).

At the federal level, Congressional debates were fuelled by questions surrounding China's international and domestic commitments towards climate change and its reluctance to enforce stringent emission controls revealing worries related to the threat of enacting domestic legislation in the face of China's accumulating emissions (Seligsohn *et al.*, 2009:2). Congressional unease surrounding efforts to abate emissions in the United States in light of China's ascendance became more acute as these incorporate concerns regarding the impact that policies will have on US trade competitiveness and industry by increasing the cost of energy since the USA will be at a competitive disadvantage in relation to China which did not have similar obligations and policies to accept mitigation targets (Seligsohn *et al.*, 2009:2; Parker and Blodgett, 2008:1). Enacting policies to mitigate climate change when there are no similar policies in developing countries, have been a central feature of these Congressional debates concerning whether or not the USA should adopt policies to mitigate climate change (Parker and Blodgett, 2008:1). From a structural perspective, even if growth rates between countries are differentiated by insignificant differences, over a greater time span this can significantly alter their hierarchic position in the international system and the distribution of power between them (Moe, 2007:1). Moreover, ideology further influenced Congressional dynamics towards the policy since there were deep-seated divisions between Democrats and

Republicans[131] regarding the Bill and "voting on this controversial bill largely followed party lines" making the legislation ideologically contested regarding the costs that would result from climate-related legislation (Bang *et al.*, 2016:215).

At the federal level, the concern in the United States regarding the creation of comprehensive climate change legislation is the potential transfer of carbon-intensive jobs from the United States to China (Seligsohn *et al.*, 2009:11; Yudken and Bassi, 2009). Principally, if costs are not distributed equally amongst all countries, and should the United States pursue an ambitious climate policy, there is concern that jobs and manufacturing could be relocated to those countries with minimal environmental standards and emission targets which create lower production costs (Seligsohn *et al.*, 2009:11; Yudken and Bassi, 2009). In the United States, concerns over carbon leakage are concentrated in those industries whose cost structures include a large percentage of fossil fuel energy as well as those industries that are participants in global markets pressuring these industries to relocate to countries with more relaxed climate policies (Seligsohn *et al.*, 2009:12). This would also have implications for the USA's position at the UNFCCC since the threat of emerging economies who were not obliged to mitigate climate change, and thus be at an economic advantage in relation to the USA, proved a formidable impediment to the USA adopting a strong climate change treaty that would exempt these countries since these countries would be able to attain relative gains at the expense of the USA.

Therewith, in the US federal system, the inability to pass the economy-wide cap-and-trade legislation since it could not be passed in Congress due to the costs associated therewith and the threat posed by China would transfer the administration's focus to broader energy legislation (Osofsky, 2011:261; Bang *et al.*, 2016:215). It thus appeared that the Obama administration would be constrained in its energy and climate policies much like the Clinton administration fifteen years earlier. Per consequence, within the structure of the USA's federal system, one of the major challenges that the Obama administration faced was how to determine a course of action that would be permissible in the US political context after

[131] More acutely, in the 2010 midterm elections, Republicans regained control of the House (Percival, 2014:144). Throughout 2010, the Republican coalition in Congress was particularly ambivalent and attempted to obstruct the EPA in its emissions reduction mandate as well as other pollution hazards, and limit funding for climate change initiatives (Goldenberg, 2010). Congressional inaction thus complicated the EPA's effort to enact the regulation of emissions (Percival, 2014:144).

Congressional inability to reach agreement (Hunter, 2009:256). In spite of Congressional opposition, the Obama administration would make a pledge to reduce US emissions by 17% below 2005 levels by 2020 at the UNFCCC negotiations in Copenhagen in 2009[132] (The White House (b), 2014:1; Robinson, 2013:2; Percival, 2014:148).

Shortly thereafter, the volatility in the Middle East due to the Arab Spring uprisings, increasing petroleum prices and the nuclear reactor accident in Japan were reasons for a review of the USA's energy policy which enhanced the need for an energy policy that would make the United States more secure by utilising all their resources and diversifying their energy portfolio (Blueprint for a Secure Energy Future, 2011:3). Within the *Blueprint for a Secure Energy Future*, released on the thirtieth of March 2011, a major concern related to energy supply had been its cost and security which required a reduction in the nation's dependence on petroleum (Blueprint for a Secure Energy Future, 2011:3). The Blueprint highlighted the importance of energy independence; a goal which every president since Richard Nixon attempted to attain, and political gridlock within the US federal system was an impediment to achieving this goal (Blueprint for a Secure Energy Future, 2011:3). Nuclear energy was supported as a means to mitigate climate change in spite of the events that occurred in Japan (Blueprint for a Secure Energy Future, 2011:3, 32). However, support for renewables was an essential component of this Blueprint, and Obama was unequivocal when he argued that, "Other countries are now exporting technology we pioneered and they're going with the jobs that come with it because they know that the countries that lead the 21st century clean energy economy will be the countries that lead the 21st century global economy. I want America to be that nation. I want America to win the future…Unfortunately some folks want to cut critical investments in clean energy. They want to cut out research and development into new technologies. They're short-changing the resources necessary even to promptly issue new permits for offshore drilling." (Obama, 2011). Congressional obstruction at the federal level towards many of the Obama administration's proposed policy goals proved to be a formidable unit-level impediment, which would also have implications for its position in the UNFCCC negotiations in Copenhagen.

[132] There will be an in-depth discussion of this in the rest of the chapter.

7.3 The Obama Administration, the US Position in the UNFCCC Negotiations and US Energy Policy

After a decade of controversial foreign as well as domestic policies that tarnished its international reputation, Obama's electoral victory was lauded as a new era in American politics by his proponents. Since 1992, however, developing countries assumed far greater influence in determining outcomes in the UNFCCC negotiations (Selin and VanDeveer, 2011:121; Parker *et al.*, 2014:8). Within this altering context, the Obama administration had indicated its willingness to be a leader in the global climate change negotiations and to cooperate with other states in the climate change regime (Parker *et al.*, 2014:8; Wirth, 2015:9). However, in spite of his support, once in office, the Obama administration had to contend with the reality of Congressional opposition as well as sub-national politics that opposed reform in these sectors. The United States has made it clear from the outset that it will not accept a legally-binding agreement that will have negative consequences for its economy, and that will not include developing countries. The UNFCCC negotiations had the potential to undermine the economic competitiveness of the USA by making certain forms of energy more expensive while mitigation policies would lead to changes in the USA's energy policy which depended on cheap and abundant fossil fuels.

The ultimate goal of the UNFCCC negotiations was always to create a set of long-term and ambitious mitigation targets of which the Kyoto Protocol was intended to merely be a stepping stone in this achievement (Leggett, 2010). After 2005, the negotiations concerning the mitigation of climate change were organised to determine the subsequent actions to be taken once the Kyoto Protocol's first commitment period expired in 2012 (Wirth, 2015:9; Dernbach and Altenburg, 2014:102). It was anticipated that such an agreement would be finalised at the Copenhagen climate summit in December 2009 (Wirth, 2015:9). At the Bali negotiations held in 2007, Parties agreed to create the Ad Hoc Group on Further Commitments under the Kyoto Protocol (AWG-KP), a workstream which was intended to determine GHG reductions for the post-2012 period (Leggett, 2010). The Parties also agreed on the Bali Action Plan which was intended to set negotiations that would figure out future commitments "for the long term, climate change mitigation, adaptation, technology and financing" and is part of the Ad Hoc Group on Long Term Cooperation (AWG-LCA) (Leggett, 2010). This second negotiation track proceeds in tandem with the AWG-KP (Leggett, 2010).

It was hoped that the Fifteenth Conference of the Parties (COP 15) climate summit held in Copenhagen would provide the means to connect the two negotiating streams and work out the difficulties and incongruence between the two (Leggett, 2010). Accordingly, there was great expectation placed on the Copenhagen Conference as it was meant to produce a new legally-binding agreement for when the Kyoto Protocol's first commitment period came to an end in 2012[133] (Bodansky, 2011:10). It was anticipated that the Copenhagen summit would be a turning point in the history of the negotiations and per consequence attracted leaders at the highest political level. Such was the anticipation, that more than a hundred world leaders attended the summit, including Barack Obama as well as the leaders of Brazil, Japan, China, Germany, India, South Africa, France and the United Kingdom (Bodansky, 2011:10). Indeed, since the 1992 Rio Earth Conference, President Obama had been the first US President to attend a high level climate summit at the Copenhagen climate conference in 2009 (Selin and VanDeveer, 2011:121). The COP 15 negotiations were for a variety of reasons a historical turning point in the negotiations (IISD, 2009:27). The negotiations represented the finalisation of two years of intensive negotiations under the Bali Road Map which commenced in December 2007 (IISD, 2009:27). Therewith, during the fifteenth Conference

[133] Although Bill Clinton did sign the Kyoto Protocol, the United States is not bound to its terms since Congress did not consent to its ratification (Barbour, 2010:11). Nevertheless, by signing an international agreement, it does create a set of obligations and "presents a 'moral obligation' by the United States to pursue accession to the Protocol (Barbour, 2010:11). Because an institutional mechanism does not exist which is able to enforce obligations on the United States, it is up to the USA to decide if under its customary law it is a signatory to the Kyoto Protocol and which actions would undermine such obligations (Barbour, 2010:12).

By the Copenhagen negotiations, the future of the Kyoto Protocol formed a major area of visibility and contention. During the Copenhagen negotiations, developed and developing nations disagreed over the future of the Kyoto Protocol (Harvey, 2011). In the lead up to the Copenhagen negotiations, the USA did not partake in the negotiations regarding the future second commitment period of the Kyoto Protocol, a position that has been maintained by the Obama administration due to a lack of domestic support (Harvey, 2011). Indeed, Todd Stern commented that, "The Kyoto Protocol is one of the toughest if not the toughest part of the negotiations…The US is not part (of those discussions) but what happens to the Protocol is relevant to whether there will be understandings on future regimes (and these) are still controversial and difficult subjects." (Harvey, 2011). The USA remained interested however in negotiations centering around the design of either a single regulatory regime to curb emissions or to create a regime that could work in parallel to the Kyoto Protocol (Harvey, 2011). For the US a key area of controversy concerned developing countries' acceptance of emission targets (Harvey, 2011). The USA made it clear that relying on an archaic distinction as contained in the UNFCCC treaty of 1992 did not reflect current circumstances and could not be used as a guide to any future treaty or regime, and whether such a regime would be legally-binding (Harvey, 2011).

of the Parties, climate change became one of the most striking features on the international agenda (IISD, 2009:27).

In spite of the hype, the Copenhagen summit was dismissed as a disappointment that resulted in an inconclusive agreement that the Parties merely took note of (Wirth, 2015:9). Although the Accord was negotiated by and accepted by the world's leading economies giving the agreement political clout, it was "noted" by the Parties, rather than adopted, "due to objections" from certain countries such as Bolivia, Venezuela and Sudan (Bodansky, 2011:12). Per consequence, the status of the Accord was inconclusive and was unable to produce a "new, comprehensive agreement" since the negotiations were unable to extend or replace the Kyoto Protocol, or to determine a new legally-binding agreement (Wirth, 2015:10; Bodansky, 2010). This outcome, as will be indicated, is not formally recognised within the UN process, and the COP had merely taken note of it (Wirth, 2015:11). To further add to the confusion surrounding the design of the Accord, the legality of the Accord is murky and lacks a set of coherent mitigation targets unlike the Kyoto Protocol (Wirth, 2015:12; Dernbach and Altenburg, 2014:102). Instead, these pledges are merely public promises which are believed to provide the incentives to motivate further action (Dernbach and Altenburg, 2014:102).

Nevertheless, the Accord includes elements pertaining to limiting global temperature rise to 2^{o} Centigrade and created a process for recording targets and actions related to mitigation for both developed and developing nations alike (Bodansky, 2010). With the limit placed on a two degrees Celsius rise, the Accord further indicated that this may be further reduced to a 1.5 degrees Centigrade rise based on the Accord's effectiveness (Wirth, 2015:12). However, in contrast to the Kyoto Protocol, the Copenhagen Accord is characterised by vagueness concerning "the level of emission cuts and the date for achieving them" (Wirth, 2015:9). It also does not contain "any global numerical targets nor does it allude to either a second commitment period, a new agreement, or any successor instrument, either binding or nonbinding" (Wirth, 2015:12). The substantive elements of the Copenhagen Accord may be interpreted as a reflection of changing international politics and the effects thereof on multilateralism.

Crucially, the Copenhagen Accord differs in three important ways in relation to the Kyoto Protocol (Dernbach and Altenburg, 2014:102; Bodansky, 2011:11). Firstly, it emphasises the use of a *pledge and review system* instead of *targets and timetables* (Dernbach and

Altenburg, 2014:102). Secondly, the Copenhagen Accord is not legally-binding (Dernbach and Altenburg, 2014:102). And thirdly, in contrast to the previous era in the UNFCCC negotiations, the Accord managed to dispense obligations to both developed as well as developing nations for the mitigation of climate change (Dernbach and Altenburg, 2014:102). Under the Accord, developed countries are encouraged to "submit 'quantified economy-wide emission targets for 2020", while developing countries need to submit nationally appropriate mitigation actions (NAMAs) (Dernbach and Altenburg, 2014:102). Thus, unlike the Kyoto Protocol, the Copenhagen Accord promotes an approach wherein each state can establish its own actions and commitments unilaterally (Bodansky, 2011:11).

In contrast to the negotiations which took place during the creation of the UNFCCC and Kyoto Protocol, one of the key principal points of contention at the Copenhagen negotiations had been the issue of mitigation actions to be taken on by developing countries (Wirth, 2015:10). Unlike earlier eras under the UNFCCC, the debate turned to an articulation of nationally appropriate mitigation actions (NAMAs) for the attainment of these objectives (Wirth, 2015:10). By the time of the Copenhagen summit, trends relating to GHG emissions began to alter with some developing nations' emissions had overtaken the emissions of developed nations[134] which rendered any global agreement to limit climate change ineffective if it did not include developing nations' efforts (Wirth, 2015:10).

The Copenhagen political agreement includes emission pledges for all major economies (Diringer *et al*., 2009). Although China as well as other major developing countries are included in these mitigation pledges, there was no indication at the time of progression toward "a treaty with binding commitments" (Diringer *et al*., 2009). As part of the agreement, developed countries committed to implementing quantified economy-wide emission targets for 2020 while developing countries would implement mitigation actions[135] that, at the time, were not defined, except that they should be in "the context of sustainable development" (Diringer *et al*., 2009).

[134] By this point, China's GHG emissions had overtaken that of the USA's (Wirth, 2015:10).

[135] In contrast to the decisions and positions taken in previous years is that for the first time developing nations agreed to submit their greenhouse gas inventories every two consecutive years in reports (Hunter, 2010:7).

7.3.1 Structural Influences

By 2009, the structure of the international system in terms of the relative power positions of states within the UNFCCC negotiations was distinctly different (Christoff, 2010:638). The active participation of the USA and China, two rivals in the international system in the midst of the changing distribution of power, in designing the architecture of a future legal regime, signalled a turning point in the UNFCCC's development (Christoff, 2010:638; Bodansky, 2011:11). Such a critical moment is necessary to consider in terms of what this meant for the evolution of US cooperation and the politics of the negotiations.

For the sake of comprehension, a brief allusion to the history of the negotiations must be made[136]. During the first period of the climate change regime from 1991 to 2001, emission reduction targets for developed countries were the main issue that had to be resolved, while developing nations were precluded from having to accept emission targets (Bodansky, 2010). The most important rift during this period was between the European Union (EU) and the United States (Bodansky, 2010). To meet the objectives of the UNFCCC, the European Union promoted the use of ambitious, legally-binding, domestic targets that were to be domestically implemented while the United States, and the Umbrella Group consisting of allies such as Japan and Australia, opposed the use of targets-based emission quotas[137] and instead continually supported market-based mechanisms, especially emissions trading, to mitigate climate change (Bodansky, 2010). Although the United States supported emission reduction targets for developing nations, the consensus around this issue was that at this point the responsibility for emission reductions was for developed countries (Bodansky, 2010).
The negotiating dynamics between developed and developing nations, and amongst developed nations, would alter after the 2001 Marrakesh Accords and their related

[136] There are three ways in which allocation of emissions is determined: (i) an allocation corresponding to emissions in a specific base year or future emissions projected based on a business-as-usual trajectory (grandfathering); (ii) an allocation determined by equal per capita basis with a disregard for historical responsibility and, (iii) allocation is determined by an equal per capita basis but contingent nonetheless on historical responsibility (Neumayer, 2000:186). However, the normative principles that are used to determine both the responsibility and allocation of emission reductions in the UNFCCC may be grouped according to (i) *responsibility* corresponding to a state's contribution to the problem, (ii) *capability* to abate emissions which in turn depends on technology, income, natural resources and institutions, and (iii) need referring to the right for countries to develop (Metz *et al.*, 2002: 212).

[137] The earlier chapter explained that the USA did support this mandate briefly during the Clinton presidency (Bodansky, 2010).

implementation decisions for the Kyoto Protocol wherein the emphasis was still placed on mitigation targets for developed countries, however there began to emerge increased pressure that developing countries need to accept some mitigation targets as well reflecting a concern for the distribution of relative gains amongst developed and developing countries, but also amongst developed countries (Bodansky, 2010).

The Copenhagen negotiations would be strongly influenced by these tensions and the disjuncture between developed and developing nations which would pressure the regime established under the Kyoto Protocol and its dynamics. The United States played an instrumental role within the final outcome of the negotiations; however in coordination with strong emerging economies as a reflection of the changing distribution of power (Dernbach and Altenburg, 2014:102; White House, 2009). In the lead up to the negotiations, the United States, as a hegemonic state, and China, its closest rival, interacted over many elements that would feature in the negotiations (IISD, 2009:27). Thereby, "Instead, the agreement suggests a bottom-up approach whereby developed and developing countries submit their pledges for information purposes to the Convention, a method advocated most prominently by the US…The Accord, however, does contain some language, reportedly a compromise between the US and China, stating that there will be some provisions for 'international consultations and analysis,' a concept yet to be defined. Those actions supported by international finance, technology transfer and capacity building will, however, be subject to international MRV." (IISD, 2009:29). The prominence of the Brazil, South Africa, India, China (BASIC) group of strong emerging economies and the USA in the development of the final outcome at Copenhagen reflects important changes in the structure of the international system and the USA's hegemonic role therein relative to other nations. Traditionally, the USA had to contend with the EU in negotiating a climate agreement (Paterson, 2009:140). While developing countries have been important actors in environmental negotiations, this new assertiveness on the part of emerging economies reflects a new position in the international system which would have consequences as the Copenhagen Accord would show.

Although it has an unofficial status under the UNFCCC, the Copenhagen Accord is a reflection of altering circumstances in the midst of the changing distribution of power in world affairs and the changing economic circumstances of developing countries resulting in increased latent power, and the intensified competition that technological and economic change brings about (Bodansky, 2011:11; Waltz, 1993:51). The Copenhagen negotiations thus proved to be a decisive moment in the evolution of the UNFCCC. Thereby, the inconclusive outcome in the Copenhagen negotiations indicated two important trends to have

emerged at this point in the negotiations (Bodansky, 2010). The first is that Copenhagen represented a fundamental shift in the climate change negotiations as it was the first time that both developed and developing nations' emissions were addressed (Bodansky, 2010). Secondly, the most crucial actors therein, namely the United States and China, had fundamental differences regarding "the architecture of a future legal regime" (Bodansky, 2010). As international regimes reflect the interests of powerful states, at this point in the negotiations, the agreement was influenced by the changing position of the United States and China and the divergent interests that these countries had which would be influenced by their hierarchic power positions within the distribution of power and their need to secure relative gains. Since institutions are a reflection of the changing distribution of power and "are based on the self-interested calculations of the great powers", within this dynamic states are capable of cooperation; however such cooperation is limited because of "the dominating logic of security competition, which no amount of cooperation can eliminate" (Mearsheimer 1994-1995: 7 -9).

With the distribution of power in the international system becoming increasingly multipolar, by this point in the negotiations, the once unified stance displayed by developing nations as a negotiating bloc began to disintegrate as the ecological, political and economic differences amongst them became more acute (Christoff, 2010:643). This disintegration of their unified position would have important consequences for the final outcome in the Copenhagen negotiations as these nations split into smaller alliance blocs as the rivalry between China and the United States would alter the dynamics of the negotiations (Christoff, 2010:643 - 644). Although the Copenhagen outcome depended on cooperation between China and the United States, their interaction was complicated due to the competitive nature of their relationship and divergent interests along with the focus on relative gains (Christoff, 2010: 644, 653). The interaction between the United States and China reflected their broader concerns over their energy security, political and economic leadership, as well as economic growth and development and the implications thereof for their power and security in an anarchic international system (Christoff, 2010:644). Nonetheless, it was in China's and the USA's interest that the conference produce a bottom-up framework that included individual voluntary targets and actions thereby being more accommodating of domestic political and economic contexts as opposed to a top-down target-setting framework (Christoff, 2010:653; Parker and Blodgett, 2008).

In Copenhagen, China was widely credited with stalling the negotiating process emerging as a central actor with an assertive role as its hierarchic position within the distribution of power was changing (Christoff, 2010:640). This assertive position was motivated by its economic, political, ecological and energy needs as well as its importance for the global economy (Christoff, 2010:644). It would not promote any agreement that would interfere with its autonomy concerning its economic and developmental needs since this would undermine the economic growth required for its political and economic stability leading to a power play between the two countries for relative gains in the negotiations (Christoff, 2010:648). Furthermore, tensions between the two countries increased over the meaning and application of the principle of *common but differentiated responsibilities* (CBDR) (Christoff, 2010:643). The USA continued to contest the principle of CBDR while emphasising that strong emerging economies adopt binding emission targets as well (Christoff, 2010:643). At the global level, although the United States adopted a cooperative approach towards multilateralism under the Obama administration, this is still infused with an emphasis on retaining the USA's military and economic supremacy due to its hegemonic position (Christoff, 2010:644).

Historically, as illustrated throughout the thesis, the development of US energy policy was linked to its hegemonic position in the anarchic international system. The design of US energy policy was thus integral for its self-help and the enhancement of its material capabilities and latent power. Yet, changing circumstances would make it increasingly difficult to design a comprehensive energy policy that could reconcile a variety of, and often conflicting, policy goals. Since a state's main goals in an anarchic international system are achieving power and security, states will pursue those goals that enhance these, while displaying a more cautious approach towards those policy goals that appear to detract from these – even if in the long-term these goals are of necessity for a state's survival. However, this endeavour is complex because of the uncertainty that is involved in the identification and establishment of goals related to a comprehensive energy policy that can enhance a state's security and power within an anarchic international system, and the trade-offs involved in the establishment of these goals. At the start of the Obama administration, there was an attempt to augment US power and security by reconciling economic growth with climate change mitigation (Minsk, 2017:5). At this point, the USA's dependence on petroleum imports was projected to increase, while the energy sector was responsible for 86% of US emissions (Parker *et al.*, 2011:1). The global financial crisis of 2008 had profound implications not only

for the USA's domestic economy but also bore an impact on international relations with the emergence of the G20, questions surrounding US power and the increased role of other states internationally (Drezner and McNamara, 2013:155). As such the Global Financial Crisis further weakened the USA. US energy policy, under the ACES, and in the Blueprint for a Secure Energy Future, focused on enhancing US security and power as indicated by the continued emphasis on economic growth and energy security, but in addition, increased competition with China, which unlike earlier energy policies, placed emphasis on renewable energy technology to compete within this rivalry (Stanislaw, 2009; Blueprint for a Secure Energy Future, 2011:6). Yet, as the Copenhagen Agreement would display, the USA was unable to play a more pronounced role within the negotiations, since its energy policy could not enhance its leadership role *vis-à-vis* China given the constraints faced by this administration (Goldenberg, 2012; Reardon, 2016:387; Seligsohn *et al.*, 2009:2; Christoff, 2010:638; Bodansky, 2011:11). Although the Obama administration approached the UNFCCC with a more cooperative agenda, since states are primarily concerned with power and security, the costs of such actions would have structurally disadvantaged the USA. Achieving congruence between the policy goals of energy security, economic growth and competitiveness, as well as climate change mitigation was unachievable, especially since at the unit-level Congress would not support the cap-and-trade regime which was intended to achieve these goals because of the USA's rivalry with China and concern over asymmetric climate policies in relation to its competitor and the implications thereof for US power and security within the distribution of power in the international system. Since cooperation is inhibited by considerations related to relative gains and cheating, the USA would have to carefully consider how the distribution of costs and benefits to different states would be affected by this cooperation, and how it would be impacted by this distribution in relation to other states (Mearsheimer, 1994-1995:12). Since considerations related to interstate cooperation take place within a competitive, anarchic international system (Mearsheimer, 1994-1995:12), the USA's cooperation with China was limited by the impact of the agreement on the USA's relative gains considerations within the context of the design of the USA's energy policy at the time.

The Copenhagen Accord was therefore a reflection of the changing distribution of power in the international system since the involvement of the USA and China, and their rivalry and self-interest, impacted the dynamics of the UNFCCC and the design of the Accord with the precedent inclusion of both developed and developing nations' emissions being addressed

therein. Yet, the agreement also reflected the differences between the two countries regarding the design of a future legal regime. Mearsheimer (1994/95:82) reminds us that, "For realists, institutions reflect state calculations of self-interest based primarily on concerns about relative power; as a result, institutional outcomes invariably reflect the balance of power... However, realists recognize that great powers sometimes find institutions - especially alliances - useful for maintaining or even increasing their share of world power." Thus, while the hegemonic position of the United States was instrumental in the design of the Copenhagen Accord and the attempt to secure relative gains for itself, it was a constrained hegemony reflecting the increasing power of China within the international system and therefore reflected their divergent interests and rivalry.

7.3.2 Domestic Influences

Copenhagen revealed a number of things about the position of the new Obama administration at the domestic and global levels. At the Copenhagen climate change negotiations, the Obama administration articulated that the United States would reduce its emissions by 17% below 2005 levels by 2020 (The White House (a), 2014). While the Obama administration indicated its willingness to engage with the multilateral process due to its goal of enhancing the USA's global leadership, the USA participated in the negotiations in a weak position (Wirth, 2015:9). This weak position arose due to the feebleness of its domestic legislation at the time since the Clean Air Act (CAA) was unable to lay the basis "for a comprehensive, nationwide cap-and-trade scheme" (Wirth, 2015:9). While the USA agreed to limit global warming to 2° Centigrade under the Copenhagen Accord, its position in the negotiations continued to be influenced by the Byrd-Hagel Resolution (Selin and VanDeveer, 2011:121; Dernbach and Altenburg, 2014:103). Since the United States was not a party to the Kyoto Protocol it made it clear that it will not sign on to anything that resembles it since there was little support for such a treaty in the Senate at the federal level (Hunter, 2010:6).

The provisional target articulated by the USA to reduce its emissions by 17% below a 2005 baseline by 2020 in line with expected climate and energy legislation[138] rather than a position in which it accepted a binding target can be traced to Congressional refusal at the federal

[138] Under this umbrella of legislation was included the American Clean Energy and Security Act which was passed by the House of Representatives in June 2009, however a proposed cap-and-trade legislation was stalled in the US Senate because of the urgency surrounding the debate on the healthcare system reform, confusion over the substance of the legislation and concerns over its economic implications (The White House, 2009)

level to enact comprehensive climate legislation (Wirth, 2015:12; Claussen, 2009, Stern, 2010). This is reflected in the terminology used to state this position, "implementing agreement", which suggested that "the outcome might be adopted as an executive agreement not requiring Senate advice and consent to ratification" (Wirth, 2015:10). Since the Obama administration adopted a different approach towards energy policy and the UNFCCC to strengthen the USA relative to its rivals and make it more secure because of this administration's policy-makers' perception that there were fewer trade-offs between environmental regulation and economic growth, an attempt was therefore made to bypass Congressional opposition at the federal level which had characterised earlier climate change negotiations. Specifically, concerns about US competitiveness and the need to include developing countries have remained prominent themes throughout this period and stem with the passing of the Resolution in 1997 reflecting a preoccupation with the costs of such policies and their consequences for the US economy and hierarchic position within an anarchic and competitive international system where the focus on relative gains and cheating remain prominent (Dernbach and Altenburg, 2014:103). Although the USA was unable to make a more ambitious commitment or produce a more comprehensive agreement, the significance of Copenhagen is that the USA pledged targets (IISD, 2014:43). Later, the Obama administration would design and implement policies to achieve this.

Nonetheless, at the unit-level, what impeded the Obama administration in the negotiations was its inability to accept a strong mitigation target nor could it ratify an agreement that was negotiated as exclusively part of the Kyoto Protocol negotiating track (Christoff, 2010:653). The Obama administration was thus constrained by domestic institutions at the federal level which were opposed to an agreement that was viewed as undermining the USA's global economic position by increasing costs to US energy while giving its rivals relative gains during a period of heightened economic uncertainty and weakness (Christoff, 2010:649; Goldenberg, 2010; Seligsohn *et al.*, 2009:2). At the time, the Obama administration was further restricted in its position by other pressing domestic issues such as healthcare reform, as well as the recession which contributed to the modest emission reduction targets put forward by the USA in Copenhagen (Christoff, 2010:650). Further complicating the USA's position in Copenhagen had been the USA's stagnant climate policy over a period of twenty years which had undermined the decarbonisation of the US economy (Christoff, 2010:643).

However, the acceptance by China and other developing countries to submit their emission actions for MRV was an unprecedented decision that helped to decrease the resistance of US

domestic politics by alleviating fears in the USA that the US would weaken itself in relation to its economic and political rivals (Christoff, 2010:651). The Copenhagen Accord proved to be advantageous for the Obama administration since the Accord was non-legally binding, the USA could present its emission reduction target without having to fight over its legal scope within a legally-binding international agreement in Congress while a further benefit was that the Obama administration was not required to either support nor discard the Kyoto Protocol (Christoff, 2010:651).

The Obama administration had to pursue a particular position within the UNFCCC because of continuous Congressional opposition at the federal level which was based on concerns regarding asymmetric climate policies and the increased costs to US energy and therefore negative consequences for its economy. Since the USA has a federal political structure, the executive is hindered in terms of the kinds of domestic energy policies and foreign climate policies that it can pursue in regards to the perceived incentives and constraints of the international anarchic system (The Constitution of the United States, 2007:8; Skodvin and Andresen, 2009; Depledge, 2005:2). At the unit-level, the USA's position within the negotiations was limited by the Obama administration's inability to pass the cap-and-trade regime in Congress since the costs of such actions combined with the trade-offs between the policy goals of economic competitiveness and climate change mitigation had Congress uneasy with pursuing such policy actions. Moreover, Congress opposed such measures because of the exemption of developing countries and the benefits that such states would gain if the USA pursued such actions. The distinction between developed and developing countries under the UNFCCC and Kyoto Protocol has being an important source of contention for the US position in the UNFCCC negotiations and its environmental policy (Parker and Blodgett, 2008). The main criticism stemming from US policy-makers is that such a distinction ignores some of the era's biggest emitters, many of whom are developing countries (Parker and Blodgett, 2008). Thereby, the emphasis that the outcome must also include developing country emissions was a major turning point in the history of the climate change negotiations up to this point (Bodansky, 2010).

For the remainder of the negotiations during the Obama administration's first presidential term, at the Cancun Summit in 2010, the Parties recalled decision 1/CP.15 relating to the Copenhagen Accord and decision 1/CP.13 relating to the Bali Action Plan[139] bringing some

[139] See Decision 1/CP.16 - The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention.

of these elements into the UNFCCC process through the Cancun Agreements (Bodansky (a), 2012; Bodansky, 2011; Decision 1/CP.16, 2011). The Cancun Agreements further elaborated on the Copenhagen Accord's sparse, three-page text into a thirty-page formulation of formalised, decision-making (Bodansky, 2011). At the Cancun Climate Summit, the USA had a more aggressive position and made it clear that developing nations, especially strong developing countries, had to accept emission reduction targets with emphasis that these reductions had to be accounted for in a verifiable system to decrease these states' relative gains and ability to cheat (Goldenberg, 2010). In terms of the architecture of the climate regime, both the Copenhagen Accord and the Cancun Agreements support a bottom-up approach towards the mitigation of climate change through nationally-determined pledges which reflected the position of the United States (Bodansky, 2011).

The UNFCCC negotiations held in Durban, South Africa between November and December 2011 established plans for the end of the Kyoto Protocol's first commitment period and the steps needed to be taken subsequently (Wirth, 2015:14). A non-binding decision was undertaken during COP 17 which allowed the Kyoto Protocol to be "extended for a second commitment period, beginning on January 1, 2013, the day after the expiration of the first commitment period, through the end of 2017 or 2020" (Wirth, 2015:14).[140] At COP 17, the Parties further agreed to eliminate the negotiating tracks established under the Bali Action Plan in 2012 and in its place implement a new negotiating process (Hurrell and Sengupta, 2012:472). With this aim in mind, the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) was adopted which was meant to "develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties" and was intended by the Parties "for strengthening the multilateral, rules-based regime under the Convention" (Wirth, 2015:15; Bodansky (a), 2012). This final outcome, in which ever form it took, was scheduled to be adopted at the twenty-first Conference of the Parties (COP 21) which was scheduled to be held in Paris in 2015 and which was to "take effect in 2020" (Wirth, 2015:15; Bodansky (a), 2012; Bodansky (b), 2012). While it still offered only general guidelines, the significance of the Durban Platform is that the conclusion of these negotiations had the potential to establish a new era in the UNFCCC negotiations (Bodansky (a), 2012). Questions surrounding the future architecture of the climate regime would continue to be worked out over the next four years.

[140]During COP 18 in Doha, Qatar in 2012, this amendment was formally adopted and it was decided that the Kyoto Protocol's second commitment period would be "extended until 2020" (Wirth, 2015:14).

Of significance to the concepts of CBDR and equity in the negotiations, in contrast to its predecessors, the Durban Platform for Enhanced Actions does not include the stringent division between developed and developing countries (Hurrell and Sengupta, 2012:472). This is a critical inclusion which has implications for the concept of CBDR and equity because this is more reflective of the USA's position which stipulated that developing nations be included in the responsibilities for climate change mitigation. Such an omission indicates the shift that occurred over the last twenty years regarding the particular place and role of developing nations within the negotiations (Hurrell and Sengupta, 2012:472). Instead, the ADP undertook initiatives to narrow the ambition gap by encouraging Parties to initiate "more ambitious reduction targets" (Wirth, 2015:15).

While the Obama administration has stated its support for various climate-related initiatives from the outset of his presidency based on this administration's policy-makers' perception of the congruence between environmental regulation and economic growth for the enhancement of the US economy, especially after the recession, at the federal level opposition from the Senate continued and by 2011 Congress had not signed the limitation of GHG emissions into legislation fearing the consequences of asymmetric climate policies for the USA's competitiveness in relation to other countries (Selin and VanDeveer, 2011:121). Because of Congressional opposition at the federal level, the Obama administration was unable to adopt legally-binding emission reduction targets at the global climate change negotiations during its first few years in office (Selin and VanDeveer, 2011:121 - 122). This would change in 2013, with the introduction of the CAP executive action.

7.4 The Interaction between the Obama Administration's Energy Policy and its Position in the UNFCCC

In contrast to the Republican George W. Bush administration which had a cautious approach towards the UNFCCC, the Democratic Obama administration adopted a cooperative approach towards the global climate change negotiations. Crucially, the international system reflected the rivalry between the USA and China which had important consequences for US energy policy and its position in the UNFCCC under the Obama administration. In this altered distribution of power, the Obama administration attempted to meet the challenge of climate change while still protecting the US position in an anarchic international system and thereby maintain the hegemonic position of the USA therein. Thus, the pursuit of this

cooperation reflected its self-interest (Mearsheimer, 1994-1995:7). It therefore designed those policies that were considered to give it a relative advantage in relation to its competitors.

In regards to the Obama administration's energy policy, at the structural-level, US energy policy is the result of the need to enhance the USA's hegemonic position after the recession of 2008 and competition with China, and concerns that China could increase its material capabilities and latent power *vis-à-vis* the USA, with the distribution of power being altered to reflect the increasing power of China therein, and therefore the need for the USA to influence economic and technological dynamics to continue to reflect and maintain US hegemony. The Obama administration's energy policy was also intended to enhance economic growth after the recession of 2008 in order to enhance US hegemony by linking energy, climate change and economic recovery but in the midst of new trends through a synthesis of climate change and energy goals. To enhance US hegemony at the structural level, the Obama administration attempted to manage the economic crisis, energy and climate change simultaneously in order to attain three goals: national security, economic enhancement and advance the USA's global leadership. In light of the changing distribution of power with the increased emphasis on China, interstate competition between China and the USA increased which compelled the Obama administration to focus on renewable energy technology and set ambitious targets because of this rivalry and in order to enhance US leadership and hegemony. With the changing distribution of power and trends therein, a low carbon future became an important aspect of US energy policy for the Obama administration.

However, while a low carbon future and renewable energy deployment became a central focus within this policy in order to enhance US security and power in an anarchic international system due to the assumptions that a low carbon future and renewable energy deployment would decrease energy costs, enhance the recovery of the US economy and give the USA a comparative advantage, as there was the perception by policy-makers within this administration that the policy goals of environmental regulation and economic growth were compatible, at the unit-level, Congressional concerns for asymmetric policies which would have allowed developing countries to attain relative gains combined with the threat posed by China and other emerging economies, led to Congressional opposition towards the cap-and-trade legislation that would have allowed the Obama administration to have a strong position at the UNFCCC negotiations because of worries related to the high costs that could be borne to the US economy (Minsk, 2017:5; Parker *et al.*, 2011:11, 12; Dernbach and Altenburg, 2014:104; Freed and Fitzpatrick, 2012:3; Osofsky, 2011:244; Sussman, 2015. Congressional

opposition at the federal level was driven by the potential higher costs resulting from climate change legislation and the potential for carbon leakage from the USA to China and other emerging economies as a result (Parker *et al.*, 2011:11, 12; Dernbach and Altenburg, 2014:104; Freed and Fitzpatrick, 2012:3; Osofsky, 2011:244; Sussman, 2015). Importantly, the Obama administration was unable to enact the economy-wide cap-and-trade legislation at the federal level due to Congressional opposition which would have implications for the US position in the UNFCCC (Goldenberg, 2012; Reardon, 2016:387). At the federal level, the continued effect of the Byrd-Hagel Resolution further limited the Obama administration in terms of what they could achieve in the negotiations with the historical continuity accentuated in the midst of Congressional opposition. The division between Congress and the Obama administration toward both the UNFCCC and US energy policy would influence the Obama administration's weak position in the UNFCCC relative to strong emerging economies, China in particular.

As a reflection of its hegemonic position at the structural level, the Obama administration sought to restore US leadership in the UNFCCC, especially because of the importance of emerging economies within the negotiations which increased interstate competition. This occurred in a context wherein the dynamics of the negotiations began to alter given the increased emissions from developing nations; especially China's, whose emissions had already surpassed that of the USA. With the relative power positions in the UNFCCC altered, the dynamics that resulted in the Copenhagen Accord indicated the changing and differing interests of powerful states therein, particularly China. The Copenhagen Accord reflects the complex position of the USA's hierarchic position wherein in spite of its cooperative approach, its position reflected its self-interest and concern over the relative gains that could be accrued to developing nations, while it was structurally weaker with the effects of the global recession of 2008, and the inability to pass the economy-wide cap-and-trade legislation further limited its position. Increasingly, the United States was constrained by China at the system-level (Minsk, 2017:5; Goldenberg, 2012).

At the structural level, China's increased power in the international distribution of power played a dominant role in influencing US energy policy and climate change legislation and its position in the UNFCCC. Both the Obama administration and Congress reacted to China's increasing role and its implications for the USA's hegemonic position, especially within the context of altered economic and technological trends. With the influence of China increasing internationally, federal politics at the unit-level would be important limitations on the Obama

administration's ability to attain its goals toward both its energy policy and UNFCCC. The unacceptably high costs alluded to by Congress in relation to US energy policy and the UNFCCC would influence federal politics in response to the changing distribution of power and the USA's weakened hegemonic position therein as a result of the recession and the high costs that could be borne to the US economy. The US rivalry with China within the international system influenced both the Obama administration and Congress, but in different ways, as the means to deal with the crisis and China were starkly different.

7.5 The Obama Administration's Energy Policy 2013 – 2015

By 2012, the context in which US energy policies have been designed over the last forty years has been transformed because of three related trends: the US economy has grown although its emissions in the transportation sector continue to decrease and perhaps the most significant is that overall US petroleum imports have decreased (Mitchell, 2013; White House, 2013). In the mid-2000s, analysts assumed that the United States' dependence on imported petroleum and natural gas was a set long-term trend (Levi, 2012). The increased production of shale gas would abruptly change this scenario within a few short years. By 2012, American production of petroleum dramatically increased for the first time in twenty-five years causing imports to decrease to the two decade low of 42 percent while US petroleum consumption has decreased by 5.5% since its peak in 2007 (Levi, 2012; Freed and Fitzpatrick, 2012:2; Ratner and Glover, 2014:7; Mitchell, 2013; Gossett, 2013: 1). Thereby the US dependence on imported petroleum has decreased in contrast to the intervening decades since 1971 (All of the Above, 2014:2). This trend has helped the United States come close to achieving the elusive policy goal of energy self-sufficiency that has been the hallmark of energy policy goals[141] for nearly forty years (Freed and Fitzpatrick, 2012:3). In addition, coal consumption has decreased; petroleum consumption remained flat, while the consumption of renewables and natural gas[142] has been increasing (QER Report, 2015:1). This would have important implications for US energy policy as well as its ability to mitigate climate change, and per consequence, Secretary of State, John Kerry stated that,

[141] Due to the combined effects of the financial crisis, and policy measures, US petroleum consumption is significantly lower in comparison to the peak of 2005 (Mitchell, 2013).

[142] Since 2005, the consumption of natural gas has risen by eighteen percent (All of the Above, 2014:2).

> "…unlike some challenges that we face – I can readily attest to this – this one has a ready-made solution. The solution is not a mystery. It's staring us in the face. It's called energy policy. Energy policy. That's the solution to climate change. And with the right choices, at the right speed, you can actually prevent the worst effects of climate change from crippling us forever. If we make the switch to a global, clean-energy economy a priority, if we think more creatively about how we power our cars, heat our homes, operate our businesses, then we still have time to prevent the worst consequences of climate change. It really is as simple as that. But getting there is proving not to be as simple…We're targeting emissions from transportation and power sources, which account for about 60 percent of the dangerous greenhouse gases that we release. And we're also targeting smaller opportunities in every sector of the economy in order to be able to address every greenhouse gas" - Secretary of State, John Kerry (Kerry, 2015).

Thus far, these trends have contributed towards improved energy security and economic growth while reducing emissions thereby helping to mitigate climate change (All of the Above, 2014:2). Although, the Obama administration has made a low carbon future a central feature of his climate and energy policies because of competition with China, one of the primary difficulties for the Obama administration has been finding the linkage and trade-offs between the "benefits of low-cost energy, the social and environmental costs associated with energy production" within the US political system (All of the Above, 2014:31). The Quadrennial Energy Review (QER)[143] which is published by the Department of Energy under the mandate of the Obama administration goes on to explain that (QER Report, 2015:1),

> "The focus of US energy policy discussions has shifted from worries about rising oil imports and high gasoline prices to debates about how much and what kinds of US energy should be exported, concerns about the safety of transporting large quantities of domestic crude oil by rail, and the overriding question of what

[143] The Quadrennial Energy Review (QER) was a strategy initiated by the Climate Action Plan in order to make certain federal energy policy resonates with the changes in the USA's changing energy landscape by matching its security, climate and economic goals (QER Report, 2015:2).

> changes in patterns of US energy supply and demand will be needed – and how they can be achieved – for the United States to do its part in meeting the global climate change challenge."

This resurgence in domestic petroleum and natural gas production was attributed as a reaction to higher petroleum prices as well as developments in the breakthrough of "computer-aided horizontal drilling and hydraulic fracturing" of tight oil (Levi, 2012; Manning, 2014:1). Because of this revolution in hydraulic production, analysts projected that the United States would become the world's largest petroleum producer by 2017, thereby displacing Saudi Arabia (Manning, 2014:2). During the last ten to fifteen years, wide-spread transformation has been evident in the petroleum market arising from this technologically-induced change (Dale, 2015:2). Even though it accounts for only five percent of the global petroleum market, because of increased US production, petroleum prices collapsed in 2014 (Dale, 2015:3). Not only is the USA's increased production of shale gas having important consequences for the US economy, it will also have far-reaching consequences globally due to altering patterns of exports and trade as well as alterations in the structure of natural gas markets (Gossett, 2013: 1).

Energy has been one of the main factors that assisted the economic recovery after the Great Recession, once again asserting the correlation between energy and economic strength and its relevance for US security and power in an anarchic system (All of the Above, 2014:3). The increase in the USA's domestic energy production has significantly contributed to job creation and GDP growth while the United States' trade deficit has been at its lowest since the 1990s even as "The resilience of the economy to international supply shocks – macroeconomic energy security[144] – is enhanced by reducing spending in net imports and by reducing oil dependence." (All of the Above, 2014:2 - 3).

[144] The Strategy highlights that the concept of energy security has a number of definitions within different contexts which range from reliability, geopolitical considerations, affordability, and availability (All of the Above, 2014:20). In spite of citing the various aspects of the definition of energy security, the Strategy adopts an explicitly macroeconomic definition of the concept (All of the Above, 2014:20). The Strategy defines macroeconomic energy security as, "…the extent to which a country's economic welfare is exposed to energy supply risks, specifically, international energy supply disruptions that lead to product unavailability or price shocks or both." (All of the Above, 2014:20).

These changes in domestic and global energy systems have changed the constraints and opportunities for the Obama administration's energy and foreign policies with the convergence of the policy goals of minimising US petroleum dependence and the market forces related to the increased production of shale gas (Mitchell, 2013; Gossett, 2013:5). The tangible effects of the increased production of shale gas are the procurement of new technologies that have drastically altered the US energy position and its energy security (Manning, 2014:1, 4; IEA (C), 2014:1). There are four economic sectors that have been influenced by the increased production of shale gas, these being transportation, power generation, industrial, and the commercial/residential sectors (Gossett, 2013:1). Due to the low price of natural gas, electricity generation has switched from coal to natural gas while the domestic manufacturing sector has experienced a revival (Freed and Fitzpatrick, 2012:3). By decreasing gas prices, the US economy has been strengthened leading to "a resurgence in US manufacturing" which led to employment growth within the energy as well as other industries through decreased energy and related costs in the industrial sector (Manning, 2014: 1; IEA (C), 2014:1).

The perceived vulnerability that the United States has experienced since the 1970s oil embargo has appeared to wane (Rampton, 2012). Although this may seem to insulate America and make the long-awaited goal of petroleum self-sufficiency finally attainable, it must be understood that the United States continues to be integrated into the global petroleum market and as a result domestic petroleum prices will increase and decrease relative to developments in the global petroleum market (Levi, 2012). Therefore, these developments are not the panacea to the nation's energy security challenges - its ability to become energy independent is unlikely and while it remains integrated into the global petroleum market it remains susceptible to price fluctuations (Levi, 2012; Mitchell, 2013). Although energy independence remains a powerful rhetorical tool in the United States, its position in the global energy market continues to be characterised by interdependence rather than independence for the foreseeable future (Mitchell, 2013).

By the end of 2014, the USA's emissions[145] were 9% below its 2005 levels (Vine, 2016). Both policy as well as market-induced factors influenced the USA's emissions' reduction (Vine, 2016:1). Due to the substitution of coal for natural gas, emissions from the electric power sector decreased by 15%, a trend that was augmented by decreasing electricity demand and increased renewable energy supply (Vine, 2016:1). Moreover, the move to a service-oriented economy has further helped to reduce industrial emissions by 5% while associated emissions from the transportation sector decreased by 10% due to an improvement in vehicle efficiency (Vine, 2016:1).

The Obama administration's American Recovery and Reinvestment Act of 2009 (ARRA) has helped to increase clean energy technology utilisation (Freed and Fitzpatrick, 2012:3). The ARRA[146], as well as state-level requirements for renewable energy utilisation, have seen wind generation grow by 116% and solar generation grow by 110% between 2008 and 2011 (Freed and Fitzpatrick, 2012:3). In spite of this progress, these efforts to secure greater attention to renewable energy and the mitigation of climate change within energy policy should be situated within a complex array of deeply entrenched consumption and supply patterns that characterise the US energy system (Behrens, 2013:1). By decreasing the price of petroleum, the price of renewables and other "clean fuels" has increased "slowing the deployment" of solar, nuclear and wind energy (Manning, 2014:1). Similarly, concerns have been raised about the environmental impacts of the increased production of shale gas thus further undermining ecological well-being (Manning, 2014:1).

7.5.1 Structural Influences

States respond to altering trends and challenges in technological and economic developments in order to maintain and enhance their hierarchic position in the international system while competing with other states for power (Moe, 2009:204 – 205; Moe, 2007:3). After a first presidential term wherein the Obama administration had limited success in reaching its policy goals, its second presidential term would prove to be far more innovative in terms of its

[145] While this obviously represents an important new trend in the trajectory of US emissions, in the long-term, US emissions are projected to increase (Vine, 2016:1). Since 2012, the price of natural gas has increased, which has led electricity generators to increasingly rely on coal (Vine, 2016:1). Overall, US emissions are projected to merely be "4.7% below 2005 levels in 2025" (Vine, 2016:1).

[146] By 2013, ARRA funding was no longer available and the Republican Party continued to voice its opposition to the "continuation of tax incentives for renewables" (Freed and Fitzpatrick, 2012:2).

ability to pursue its objectives. Ultimately, at the structural level, states are primarily concerned with attaining power and security, and are either more or less optimal in attaining these. Since a change in the distribution of power alters a state's calculations in the international system, the ascent of China would drive the administration's attempts to attain those goals that would enhance its material capabilities and latent power in relation to its main rival (Johnson, Cha and Searight, 2016). Thereby, changing material circumstances can either impede or enhance an administration's ability to pursue its policy goals by changing the costs associated with pursuing such actions. Due to the increased production of shale gas and its effects on the US energy sector, the Obama administration could pursue a number of its policy goals contained in the Climate Action Plan (CAP) (2013), the All-of-the-Above Energy Strategy as a Path to Sustainable Economic Growth (2014), and the Clean Power Plan (CPP) (2015). Due to the reduction in the costs of policy action as a result of the increased production of shale gas, there were fewer trade-offs between the goals of economic growth and environmental regulation thereby altering trends that would have implications for the USA's hierarchic position relative to other states.

The USA's increased production of natural gas played a role in facilitating a transition away from coal and towards the use of natural gas to meet its national interests of enhancing its competitiveness relative to other nations in the clean energy economy since natural gas is perceived to assist countries to make the transition (Percival, 2014:149). The USA is not only changing its domestic sphere *vis-à-vis* energy and climate change but it is also changing trends at the international level to suit its objectives though its hegemonic position, a characteristic which much of the historical record attests to. While the distribution of power is a strategic calculation that states must constantly be aware of, the introduction of new technological and economic trends has ripple effects that will determine the ability of countries to ascend and descend in the international system since structural change occurs at the unit-level with unit- and structural-levels influencing one another (Waltz, 1993). Countries are thus required to keep up with new trends in energy technology in order to enhance their material capabilities, latent power and security. The USA's isolated position in the UNFCCC meant that the Obama administration has been seeking an increasingly influential US role that can be linked to its domestic political economy while at the same time enhancing its hegemonic position. At the system-level, the Obama administration is concerned about alterations in the distribution of power with the rise of emerging economies, especially China, and the consequences this may have for economic and technological trends

which has the potential to undermine the position of the United States in the international system by undermining its latent power.

The increasing rivalry with China due to the changing distribution of power influenced the policy developments of this administration within a context wherein the costs related to the mitigation of climate change and economic growth and energy security have altered which have enhanced the USA's ability to influence trends at the structural-level (Hirschfield and Davenport, 2015). The Obama administration thus placed keeping-up with trends at the international level as an important policy priority not only to enhance the USA's hegemonic position *vis-à-vis* this rivalry in the international system, but to also influence the international system through US hegemony, with Obama further emphasising that, "It's up to us, the United States of America, to help remake that system" (Obama, 2016:9). Since lower cost energy prices have increased the competitiveness of US industries as well as energy security, the USA's power and security have increased within the anarchic international system giving it greater leverage and enhancing its self-help relative to other nations (Fielden, s.a.). At the structural-level, the Obama administration sought to influence trends related to the global clean energy economy to compete against China (The Economist, 2014). By influencing the international system, the Obama administration would be able to enhance the USA's hegemony and security relative to China.

Since international institutions have as their most important function meeting the national interests of powerful states (Waltz, 2000:21), the Obama administration is aware of international trends that are beginning to transition towards a low carbon future and that increasingly powerful states are influencing the UNFCCC at the expense of the United States thereby pressurising the Obama administration to develop an energy policy that could enhance the USA's mitigation of greenhouse gases while simultaneously increasing the USA's economic growth and energy security. Under such tricky circumstances, the USA's energy policy reflects changes at the international level and also domestic level. The traditional areas of contestation within the USA's energy policy have been the attainment and mix of energy sources, and the costs related to this, and the trade-off between environmental protection and economic growth that arise from this. With the changes that have occurred in the energy sector because of increased US production of natural gas and petroleum, increased generation of electricity from renewable sources, and decreased petroleum consumption, have minimised the costs to the US economy, its carbon emissions have been reduced, and its energy security is improved through the reduction of the dependence of the US economy on

petroleum and petroleum imports (All of the Above, 2014:2). This has changed the context in which US energy policy has been designed over the last four decades. This has important implications for the USA's hegemonic position and security through the enhancement of its latent power and by broadening the scope for US action both internationally and domestically.

These policies have been developed in a context wherein, "America is producing more oil, gas, and renewable energy, and the U.S. is becoming more energy efficient overall. These trends are increasing our energy security, cutting our carbon pollution, and enhancing our economic growth." (Obama White House, s.a.). With the trade-offs between these policy goals been reduced, this new policy framework has grappled with the manner in which these alterations in trends related to energy supply and demand can be used for the USA to be able to mitigate climate change as part of the UNFCCC framework because of a change in its material capabilities and latent power through a reduction of the costs to the US economy to mitigate climate change which would allow the USA to influence the UNFCCC to meet its objectives in relation to China (UNFCCC, 2015). The change in the USA's political economy facilitated the Obama administration's ability to pursue its preferred energy policy. However, issues related to climate change mitigation and the energy mix continue to be politicised since environmental protection is promoted to the extent that it does not undermine economic growth – a key aspect of US power in the international system (All of the Above, 2014:20; Lin, 2014:20).

While the USA has responded to the changing distribution of power in the international system, and the increased power and influence of China therein (Johnson, Cha and Searight, 2016), the material change brought about through the increased production of shale gas and its impact on the US energy sector, which have characterised the Obama administration's second term in office, has facilitated the design of an energy policy more congruent to the synthesis between economic growth and environmental regulation by minimising the costs associated therewith and thus permitted the Obama administration to pursue its goals with more ease. Such goals are nevertheless still a reflection of its hegemonic position and are aimed to secure US self-interest internationally in the midst of altering economic and technological trends. In particular, the USA's rivalry with China has influenced the Obama administration to pursue goals that would improve its material capabilities and latent power in the midst of the changing distribution of power.

7.5.2 Domestic Influences

A considerable amount of policy change occurred during the Democratic Obama administration's second term in office. In his 2013 State of the Union Address, following shortly after his re-election for his second presidential term, Obama forcefully declared that, "If Congress won't act soon to protect future generations, I will. I will direct my cabinet to come up with executive actions we can take, now and in the future, to reduce pollution, prepare our communities for the consequences of climate change, and speed the transition to more sustainable sources of energy." (Quoted in Robinson, 2013:1). During his 2013 State of the Union Address, President Obama pressed Congress to be willing to act on climate change that would involve a market-based and bipartisan solution (Percival, 2014:147). However, the Obama administration made it clear that should Congress hesitate to act[147], it would use executive actions that could enhance the transition to renewable sources of energy and protect communities from climate change (Percival, 2014:147). Establishing such comprehensive federal legislation would facilitate the US to become a signatory to a global climate agreement that would be based on domestic support and would enable such an international outcome to be legally-binding in the United States (Robinson, 2013:2). However, since the Republican Party dominated both the Senate and the House after the 2012 election, the Obama administration had to rely on executive actions "to circumvent Congressional gridlock" thereby not requiring Congressional approval at the federal level (Bang *et al.*, 2016:215; Leggett, 2014:1).

Shortly thereafter, the Obama administration released the Climate Action Plan (CAP)[148] on the 25th of June 2013 as part of executive actions which sought to reduce US greenhouse gas emissions and whose measures do not require Congressional approval (Robinson, 2013:2; Leggett, 2014:1; Percival, 2014:148; CAR, 2014:8). The act consists of three main policy goals: reduce US carbon emissions, enhance the USA's adaptation measures; and promote the USA's global leadership which would have a positive impact on the US economy while

[147] There have been other global environmental treaties where Obama relied on his presidential powers and bypassed Congressional support such as the Minimata Convention on Mercury "when he determined that the US could deposit its instruments of acceptance. On November 6, 2013, the US became the first country formally to accept the Convention after the Obama administration determined that existing US law already provided sufficient authority for the US to implement it." (Percival, 2014:153 - 154).

[148] The CAP alludes to adaptation measures however, since the focus of this thesis is on mitigation, the Plan's adaptation objectives shall not be the focus of analysis.

meeting the USA's international objectives as the goals of economic growth and environmental regulation were perceived by policy-makers within this administration to be compatible in the midst of the emphasis placed by these policy-makers on a low carbon future and its enhancement of the US economy (Robinson, 2013:2; Percival, 2014:148; All of the Above, 2014:3). The CAP is intended to target all key economic sectors, consisting of buildings, transportation, as well as power, and focuses on reaching the pledged goals that the USA made in Copenhagen: namely decreasing emissions by 17 percent below 2005 levels by 2020 and further decreasing these emissions 26 to 28 percent from 2005 levels by 2025 (Tubman, 2015:1; The White House (b), 2014:1; Robinson, 2013:2; Percival, 2014:148). The most prominent aspect of the CAP is its objective of reducing emissions[149] from power plants which are responsible for approximately thirty percent of total US greenhouse gas emissions (Tubman, 2015:1). Simultaneously, the Obama administration also issued a Presidential Memorandum which encouraged the EPA to "further regulate greenhouse gas emissions from new power plants, as well as modified reconstructed and existing facilities, under the Clean Air Act." (Wirth, 2015:24).

The Plan can be interpreted as a reflection of the Obama administration's attempts to influence the USA's domestic energy mix to better suit the international objectives that it is attempting to reach in the UNFCCC to enhance US leadership therein in relation to its rivalry with China (UNFCCC, 2015). The CAP's international objectives which focus on various strands at the global level consist of: increasing clean energy use by enhancing fuel switching, nuclear energy, clean coal technologies and the development of natural gas; the advancement of negotiations within the WTO that would focus on "trade in environmental goods, including clean coal technologies", to diminish the use of fuel tax subsidies both domestically and internationally, to stop federal support for "public financing of new coal-fired power plants overseas, except the most efficient coal technology available in the world's poorest countries, or facilitates deploying carbon sequestration technologies"; and finally, the plan aims to address global leadership on climate change by designing an agreement that is inclusive, flexible, and ambitious (IEA, 2014:42; Climate Action Plan, 2013:5; Waskow, 2013). Although the USA stipulated that achieving their international targets depends on the condition that other major economies also undertook emissions reduction actions, change in the US energy system has meant that achieving the Obama administration's Copenhagen

[149] The Plan also aims to enhance renewable energy generation by 2020 by fifty percent (Robinson, 2013:2).

commitment of a 17% reduction of emissions by 2020 compared to 2005 levels[150] is obtainable even in the absence of legislation indicating altered material constraints and the implications thereof for the Obama administration to pursue its goals based on this administration's perception of the compatibility between environmental regulation and economic growth and the reduced costs for the US economy (Robinson, 2013:2; Leggett, 2014:1).

At the unit-level, because of the continued Congressional stalemate, the Obama administration has attempted to use existing "executive branch authority" to deal with climate change as well as energy related issues (Leggett, 2014:1). In spite of actions taken by states and other non-governmental organisations to advance progressive legislation on the issue of climate change, Congress is stalled by a division on "whether climate change risks merit raising current costs to the economy in exchange for benefits that would mostly accrue to future generations, people in other countries, and stability of Earth systems." (Leggett, 2014:1). To conclude, while the CAP remains an important attempt to tackle climate change in the US political system, it also illustrates the hurdles involved in passing federal climate change legislation, as well as the increasing costs involved in mitigation as it regulates specific plants and technologies, and the EPA will incur significant political and legal challenges in regulating GHG emissions for current coal-fired power plants (Robinson, 2014:1). Additionally, while the plan mentions commitments to international efforts to deal with climate change, these commitments are vague (Wirth, 2015:25).

Already a number of these initiatives have incurred opposition from certain states and Congress (Tubman, 2015:1). Ultimately, there remain opposing views of the costs to the US economy arising from energy policy goals. Those who oppose the CAP point out that it will curtail job creation and also increase the price of energy (Percival, 2014:149). They further highlight that as Congress has not enacted "new legislation addressing climate change, the president has overstepped the bounds of his constitutional authority." (Percival, 2014:149). Although this is a point raised by critics, it should be appreciated that in this particular instance, the law is quite unclear over the extent of executive power (Percival, 2014:149). At

[150] The USA's gross emissions were 10% below that of 2005 levels in 2012, otherwise 5% higher than its 1990 levels; while in 2007, its emissions had peaked (Leggett, 2014:1). Between 1990 and 2012 its population grew by 2% while its economy (measured by Gross Domestic Products [GDP]) increased by 73% (Leggett, 2014:1).

the unit-level, the Obama administration maintains that congressional gridlock has necessitated that it use its "executive power expansively" (Percival, 2014:153).

To further comment on these changes in the US energy sector and the administration's policy goals, in May 2014, the Obama administration released their *All-of-the-Above Energy Strategy as a Path to Sustainable Economic Growth* which developed out of the 2005 Energy Policy Act which was the last time Congress enacted comprehensive energy legislation (Lin, 2014:17). The Strategy hinges on the transformation of the US energy sector and thus sets out to advance energy sources that are characterised by zero or low emissions such as renewable energy technologies and nuclear (All of the Above, 2014:2). It likewise supports energy efficiency, carbon capture and storage and what it terms "environmentally responsible production of oil and natural gas" (All of the Above, 2014:2). The Strategy consists of three goals: supporting job creation and economic growth, deploying low-carbon technologies, and laying the foundation for a clean energy future; and enhancing energy security (All of the Above, 2014:2). Critically, the Strategy relies on natural gas to facilitate the transition towards the low carbon future (All of the Above, 2014:4).

Unlike the *Blueprint for a Secure Energy Future* of 2011, the Strategy cites the United States' Copenhagen pledges as an important driver of this policy change and finding these linkages (All of the Above, 2014:31). Thereby, the Strategy cites Obama's 2013 State of the Union Address and his call on Congress to pass adequate legislation (All of the Above, 2014:20). Since Congress did not pass such legislation, the administration had to make use of other tools "with which to deploy low carbon technologies" at the federal level (All of the Above, 2014:31). Critics however, point out that the plan appears to promote environmental regulation to the degree that it will not hurt fossil fuel production (Lin, 2014:20). In spite of its rhetoric, the Plan had only an incremental effect on the USA's energy mix and maintains the overall structure of the US energy system (Lin, 2014:19).

Because of the interrelated challenges of climate change and the deployment of renewable energy, on the third of August 2015, the Obama administration released the Clean Power Plan (CPP), designed in light of the Paris negotiations which were set to take place in December 2015, which has widely been applauded as the strongest action taken towards climate change by any administration by that point (Vaughan, 2015; EPA, 2015; White House (b), 2015; Department of State, 2015; White House Briefing Room, 2015). The administration argues that the CPP will "…ensure the US will stay on a path of long-term clean energy investments

that will maintain the reliability of our electric grid, promote affordable and clean energy…and continue the United States leadership on climate action." (White House (b), 2015). In particular, to transition to clean energy sources, while growing the economy, the plan supports solar as well as wind deployment and has measures such as increasing renewable energy generation by 30% by 2030 as well as reducing carbon pollution from power plants by 32% by 2030 in relation to a 2008 baseline (White House Briefing Room, 2015; BBC, 2015; Vaughan, 2015; Department of State, 2015). Moreover, the CPP, sets the "first-ever carbon pollution standards for power plants" which are the biggest source of emissions in the United States (White House Briefing Room, 2015; Department of State, 2015). The EPA (2015) has described the CPP as, "…the final Clean Power Plan is fair, flexible and designed to strengthen the fast-growing trend toward cleaner and lower-polluting American energy."

Thus far, the plan has been met with controversy at both the federal and state level with many businesses and states declaring outright opposition to the plan, while other states and businesses have signalled their approval citing economic performance and job improvement as key benefits that the plan will incur (Bang *et al*., 2016:215; Vaughan, 2015). Principally, there are two main areas of controversy surrounding the CPP. Firstly, the controversy revolves over whether the president and the EPA have sufficient authority under the Clean Air Act to establish extensive regulations for CO_2 emissions that do not include Congress thereby overstepping the president's executive powers and incurred federal overreach (Bang *et al*., 2016:215). The second controversy hearkens back to the political economy of the US energy system and the emerging tensions between coal states and those states with renewable energy deployment. Due to the protracted absence of federal legislation regarding a regulatory response towards reducing GHGs; in this vacuum, a number of states have stepped in and implemented either by themselves or through regional agreements, restrictions on emissions by electric power plants within their jurisdiction (MacDougald, 2008:431).

Thus far, these initiatives have produced mixed and limited results. In spite of these states' efforts, due to the impact of leakage, such systems have provided a comparative advantage to those states that have not placed such restrictions on their power plants (MacDougald, 2008:1431). Thereby, without federal regulation it has been difficult for this system to be effective. Fossil fuels such as coal are pervasive in the US economy with coal being produced in large amounts and used for electricity generation; thereby states, especially those which are heavily dependent on coal mining such as West Virginia, Kentucky and Wyoming, oppose

measures to limit coal-based electricity generation since this would distribute significant losses to them and lead to slower economic growth as well as job loss (BBC, 2015; Bang *et al*., 2016:215; Leaf *et al.*, 2003:306). This illustrates the difficulties the executive administration faces in implementing comprehensive legislation at the unit-level due to the divergences at the federal level concerning the factors that lead to economic prosperity, and thereby power and security in an anarchic system and the related asymmetrical distribution of costs and benefits to different sets of actors at the federal level.

The Obama administration's second term in office had been characterised by the use of executive actions to circumvent Congressional opposition and inaction at the federal level in the midst of a changing energy system and material constraints. Within these complex dynamics, the Obama administration's policies were designed in light of but to also influence the UNFCCC. As such, the Obama administration's use of executive actions indicate the feasibility of what can be practically achieved in the US federal system.

7.6 The Obama Administration, the US Position in the UNFCCC Negotiations and US Energy Policy

Under the Obama administration, the United States has consistently articulated its willingness to play a leading role in global efforts to address climate change and had taken precedent-setting steps to meet this goal (Kerry, 2015; White House (a), 2015). To attain the international leadership goal set out by the CAP, in November 2014, the United States released jointly with China[151], their Intended Nationally Determined Contributions (INDCs) in anticipation of COP 21 at the end of 2015[152] (Tubman, 2015:3). The two countries also

[151] The administration has also emphasised other multilateral efforts to deal with climate change (Tubman, 2015:4). In January 2015, the United States issued a joint announcement with India regarding clean energy cooperation and climate change in anticipation of COP 21 and as part of the CAP (Tubman, 2015:3). An important initiative has been the joint pledges given by the USA, India and China in 2015 "to advance efforts under the Montreal Protocol to phase out HFCs" (Tubman, 2015:4). The administration also engaged multilaterally with other states to decrease tariffs in the World Trade Organisation (WTO) on environmental goods (Tubman, 2015:4). Market-based mechanisms continue to be supported by the Obama administration to achieve these goals (Tubman, 2015:4).

[152] Alongside this renewable energy agreement, Barack Obama and Chinese premier Xi Jingping further agreed to the Montreal Protocol's phase out of HFCs, which are ozone-depleting but are also GHGs (Percival, 2014:153).

described “joint research projects on clean energy, carbon capture, and other collaborative efforts.” (Tubman, 2015:3).

Certain decisions that have been taken at recent COPs, most notably at the Warsaw and Lima COPs, point out that Intended Nationally Determined Contributions (INDCs)[153] to reduce emissions will likely be part of the final decision taken at the negotiations at COP 21 (Bodansky, 2015(a):1). In order to sustain US leadership on climate change, the United States submitted its INDC in April 2015, making it one of the first countries to do so, and indicated its willingness to reduce its economy-wide emissions by 26 to 28 percent below 2005 levels by 2025, and 17% below 2005 levels by 2020, in order to meet the objective of the Convention (Vine, 2016:1; Tubman, 2015:3 – 4; INDC, 2015; White House (a), 2015). The target contained in the US INDC was grounded in an analysis of cost-effective carbon pollution reductions that could be attained under existing legislation and which could assist the United States to achieve economy-wide reductions of 80% by 2050 (INDC, 2015).

In the agreement reached between the two major emitters, China agreed to reduce its emissions by 2030, while the United States agreed to reduce its emissions by 26 to 28% in relation to a 2005 baseline by 2025 (EIU, 2014). This marked an important turning point in the politics of climate change as this was the first time that China pledged to reduce its emissions - it usually alluded to its economic development and energy strategy as an excuse to not have done so in the past – as a developing country the need to increase the population’s prosperity will be correlated to increased energy consumption from fossil fuels (EIU, 2014; Lewis, 2007-08; Gao, 2005:1). Not long before the historic announcement by the United States and China, the EU also announced a 40% reduction below 1990 levels by 2030 (WRI, 2014). Part of the USA’s agreement to limit its emissions was on the condition that other countries pursued similar goals. And it is evident that US leadership is essential in accelerating the negotiations as other countries soon followed its example in submitting INDCs (Office of the Press Secretary, 2015; Parker and Karlsson, 2018:525).

Obama needed to secure cooperation from China to implement “ambitious actions to reduce emissions” before the COP 21 negotiations in Paris (Moore, 2015). At first glance, it would

[153] At the Nineteenth Conference of the Parties (COP 19) held in Warsaw, Parties decided to submit Intended Nationally Determined Contributions (INDCs) by March 2015 if these will be prepared in preparation for COP 21 (WRI, 2014). At COP 20, one of the major areas that countries had to consider during negotiations was how these INDCs were to be presented and assessed (WRI, 2014).

appear that the collaboration between China and the United States on climate change would appear to negate the main assumptions of realism. Since in an anarchic international system states are mainly concerned with relative gains and cheating, the Obama administration had to secure the cooperation of China and other major emitters in order to ensure that they would not disadvantage the United States in the negotiations, especially in relation to the competitiveness of US industries and carbon leakage. The increased production of shale gas would allow the United States to achieve two related goals that had previously inhibited it, that is, securing the cooperation of developing countries to accept mitigation targets, and that the US economy would not be undermined. Since natural gas produces less CO_2 per unit of GDP, the USA could consequently mitigate its emissions without incurring costs to its economy and not undermine its security, thereby pressurising other countries to do likewise because of its hegemonic position.

At this point, it may be useful to briefly compare the Bush and Obama administrations' use of bilateral and multilateral agreements to advance their respective positions regarding climate change[154]. Both the Bush and Obama administrations placed emphasis on multilateral and bilateral agreements to deal with climate change. The goals relied on by US administrations to reduce US GHG emissions arising from energy production indicate "two distinct and contrasting perspectives" (Pugh, 2015). The type of action used to mitigate climate change was influenced by the administrations', and their political parties', ideological position concerning the role of government and the private sector in the scope and content of such actions and regulations (Pugh, 2015). This ideological division was evident in the types of engagement and activities that the Bush and Obama administrations promoted: the Bush administration's policies favoured investments that enhanced existing technologies which juxtapositions to the Obama administration's investment in new forms of technology which

[154] The USA supports multilateral efforts that promote sharing scientific information as well as clean and efficient technologies (US EPA, 2016). Some of these multilateral "instruments" include the *Global Methane Initiative* which focuses on capture and use of methane (CH4) gas, the *Global Data Centre Energy Efficiency Task Force* to improve energy efficiency, and the *Carbon Sequestration Leadership Forum* focused on the development and improvement of technologies for the separation and capture of carbon dioxide for transport and long-term safe storage (US EPA, 2016). Related to these multilateral efforts, the US participates in bilateral partnerships relating to energy and sequestration technologies as well as advancing methodologies for the monitoring and measurement of emissions such as the Energy Efficiency Promotion which focuses on partnerships with developing countries, mainly China and India, and also *Economic Modelling Workshops*, *Greenhouse Gas Inventories* and *Low Emission Development Strategies* (US EPA, 2016).

"could have an impact on existing market structures and technological preferences" (Pugh, 2015). Ideological differences also predisposed these administrations to pursue their goals in multilateral institutions such as the UNFCCC, with the Bush administration being more hesitant to engage with such multilateral forums, while the Obama administration took the opposing stance in juxtaposition to his predecessor, however both administrations pursued their goals on climate change using regimes that were also run in parallel to the UNFCCC (Pugh, 2015). The USA's hegemonic position was used to design regimes on the basis of US power and with the intent of meeting US national interests.

Under these circumstances, the Twenty-first Conference of the Parties (COP 21) was held between the 29th of November and the 11th of December 2015 whose Paris Agreement, the result of a four year negotiating process[155], has been described as a historical turning point in the UNFCCC regime (Leggett (b), 2015; Dimitrov, 2016:2), introducing a new framework surrounding the legality of the agreement, and a distribution of obligations and responsibilities[156] to all Parties. Therewith, the Paris Agreement finalised the paradigm shift from the Kyoto Protocol's division between developed and developing countries in the Annex I/Non-Annex I categorisation, to the global framework that emerged with the Copenhagen Accord (Bodansky, 2015(b)).

[155] The Lima Call for Climate Action reiterated that an ambitious agreement must be made in 2015 which is based on the principle of *common but differentiated responsibilities* within the context of different national circumstances (IISD, 2014:41). Caveats between developed and developing nations continued to disrupt the Lima negotiations (EIU, 2014). Developing nations protested that since developed nations are responsible for the majority of emissions they should bear responsibility for its associated costs; however developed nations point out that it is developing nations which currently are responsible for the majority of emissions (EIU, 2014). In addition to the controversy surrounding the principle of CBDR, the negotiations were further divided about the legal status that the final agreement would have (EIU, 2014). The US negotiating position has remained strongly opposed to any agreement that would be legally-binding should developing nations be exempt from adopting legally binding emission reduction targets because of its fears of being disadvantaged by its competitors in an anarchic international system (EIU, 2014; Harvey, 2011).

[156] One of the key developments in Lima was the support for a long-term mitigation target by over one hundred countries indicating support for a transition to a low carbon economy (WRI, 2014). Whether this is merely rhetorical or a genuine commitment to sustainability remains to be seen. However, it does indicate changing perceptions of and alteration of trends in the global economy (WRI, 2014).

The UNFCCC negotiations that took place in Paris were set to come up with a global agreement to reconsider, review and extend the legal architecture concerning global climate change (Wirth, 2015:3; Robinson, 2013:2). To hearken back to the Durban Platform adopted in 2011, the discussions sought to establish a new round of negotiations to "develop a protocol, another legal instrument or an agreed outcome with legal force under the UNFCCC applicable to all Parties'" and which maintains the principle of CBDR "in light of different national circumstances" (Bodansky, 2015(a):1; Leggett (b), 2015:1; IISD, 2014:41; UNFCCC Lima Call for Climate Action, Decision -/CP.20; EIU, 2014). The outcome of the Durban Platform was intended to be adopted at COP 21 and to be applicable from 2020 (Bodansky, 2015(a):11; Leggett (b), 2015). Bodansky warned that, "The success of ongoing negotiations to establish a new global climate change agreement depends heavily on the agreement's acceptance by the world's major economies, including the United States." (2015(a):v)

For two decades the UNFCCC revolved around a division between developed and developing countries (Levi, 2015). The global political economy has changed significantly since the establishment of the negotiations making it increasingly difficult to support such a division (Levi, 2015). Thereby, a precedent is set under the Paris Agreement in that it establishes a "single framework to promote transparency and track progress of Parties' efforts applies, for the first time, to all Parties." (Leggett (a), 2015; Levi, 2015). Nonetheless, the UNFCCC continues to draw controversy in the United States because of the association that it bears with the Kyoto Protocol (Wirth, 2015:52). The emphasis placed on the binding nature of "a protocol, another legal instrument or an agreed outcome with legal force" has proven to be particularly difficult to pass domestically, both amongst the branches, especially between the executive and congressional branches of government, but also between the federal government and the states (Wirth, 2015:52). If the final agreement were a political agreement, much like the Copenhagen Accord, then the president would have the legal authority to endorse it without Congressional approval (Bodansky, 2015(a):1, 13). However, if the outcome in Paris were legal in nature, then it was unclear under which conditions the United States would be able to accept such an agreement (Bodansky, 2015(a):1). By being ratified by the Senate, these treaties attain the status of federal law and are therefore binding in terms of their implementation (Skodvin and Andresen, 2009). The consequence is that the Senate is weary of ratifying agreements which contain specific commitments unless these are "already established under federal law" (Skodvin and Andresen, 2009). However, there does not exist a lack of legislation for the United States to accept a legally-binding agreement at

COP 21 unlike the domestic conditions which existed in 1992 when the UNFCCC was enacted, or the Kyoto Protocol in 1997, and the Copenhagen Accord in 2009 (Wirth, 2015:53). Ultimately, at the unit-level, the real challenge continues to be political rather than legal (Wirth, 2015:53).

Per consequence, the legal nature of the Paris Agreement was one of the most contentious issues during the negotiations and in many ways reflects the changing circumstances of the global political economy and international relations that had occurred over the last two decades (Bodansky (a), 2016; Bodansky (b), 2016:2 – 3; Leggett (b), 2015:1). While the Paris Agreement is a treaty as understood by the Vienna Convention on the Law of Treaties, not every provision carries a legal obligation such as the reduction of emissions (Bodansky (a), 2016; Leggett (a), 2015; Goldenberg, 2015). Thereby, the Paris Agreement is a legally-binding instrument, although with some non-binding elements, unlike the Copenhagen Accord which is merely a political agreement (Bodansky (b), 2016:3). The Paris Agreement therefore has a bottom-up framework which reflects rather than dictates national policy, and thus allows individuated national circumstances to influence policy content (Bodansky (b), 2016:2). In order to incentivise more ambitious action, INDCs are enforced by norms that enhance their accountability and transparency and that such actions become more ambitious over time (Bodansky (b), 2016:2). It is thus possible to hold states accountable as well as increase ambition with the progression of time (Diringer, 2015, Levi, 2015).

The Paris Agreement is in many ways built on the foundations of the Copenhagen Accord and bears little resemblance to the Kyoto Protocol to which the United States is not a Party (Bodansky (a), 2015; Bodansky (b), 2015; Leggett (b), 2015). The Paris Agreement is global and is thus devoid of the developing/developed; Annex I/non-Annex I dichotomy and instead has commitments that will be applicable to most Parties (Bodansky (a), 2015; Bodansky (b), 2015; Bodansky (b), 2016:3). The significance of Paris is that it has adopted a new paradigm that allows states to accelerate the ambition of their actions to mitigate climate change (Bodansky (b), 2016:3).

7.6.1 Structural Influences

The USA occupies a central role in the UNFCCC negotiations because it is the world's second biggest emitter of GHGs as well as the biggest economy and its actions influence other states to adopt similar policies (Bang *et al.*, 2016:214). Moreover, as a hegemonic state, its role in the design and functioning of the UNFCCC is indispensable, and the USA's role

therein can be understood as the pursuit of its self-interest and the enhancement of its hegemonic position while preventing other countries from accumulating relative gains and cheating. The Obama administration has made the enhancement of US leadership in the UNFCCC one of its key goals (UNFCCC, 2015). As such, there has been a development of the link between the energy policy it developed during its second presidential term and US cooperation within the UNFCCC in order to attain its key goals in the UNFCCC. In the past, US non-participation was justified by the exclusion of developing nations from mandatory mitigation and flawed treaty design along with the high costs that would be borne by the US economy (Bang *et al.*, 2016:214). As such, within the distribution of power in the international system, US cooperation within the UNFCCC would have implications for its relative position of power and self-help while enhancing the material and latent power of its rivals, resulting in US hesitation to cooperate. Under these circumstances, it was pivotal for the USA that the negotiations produce a bottom-up framework so as to not undermine US power and thereby hegemony within the international distribution of power by limiting the costs to the US economy (Bang *et al.*, 2016:215).

The UNFCCC negotiations have long been a battleground for countries' geopolitical ambitions and wider national interests. Since 2009, the UNFCCC negotiations have seen a shift in the relative positions of countries therein reflecting altering trends in the distribution of power in the international system, with ascending developing nations, especially China, bearing greater influence over the design of its architecture (Parker and Karlsson, 2018:524). This is not to negate the centrality of the USA in negotiating outcomes and wielding power within the negotiations as it is still a hegemonic power and its role in the UNFCCC is central, but it is not the unbridled power of the early period of hegemonic ascent, but a declining power that increasingly clashes with emerging economies. Thereby, policy-makers play a chess game that has to consider the moves of opponents. Although still hegemonic, the rise of China, India and other developing countries, placed parameters on the USA's participation in the negotiations and required it to cooperate with China to design the agreement reflecting the changing distribution of power in the international system (Parker and Karlsson, 2018:524). Yet, the changing positions of states in the international hierarchy came with changing interests, interests that were closer aligned to that of the USA in the design of the agreement. This is unlike the Copenhagen negotiations of 2009 wherein China and the USA had irreconcilable negotiating positions which led to the breakdown of the Copenhagen negotiations.

As the world's two most powerful countries within the international distribution of power, the USA and China[157] have for a number of years been the two central players in the negotiations and while the USA was a key actor in the drafting of the final Paris Agreement, especially concerning certain legal provisions therein, it was the interaction between China and the USA that developed some of the major provisions in the agreement reflecting their positions of power and material capabilities in the international distribution of power (Oberthür, 2016:4 – 6; Bodansky, 2015(b)). In the changing distribution of power in the international system, the Paris Agreement reflects the changes that occurred in states' material capabilities since the USA had to actively engage emerging states to secure the final agreement. While international regimes reflect the interests of powerful states, an important aspect that worked to the United States' favour was that China as the world's second largest economy and biggest GHG emissions producer has substantially different national interests than it did twenty years ago, and has less in common with developing countries, than earlier eras within the UNFCCC and as such China has "decreasing interest in a sharp differentiation between countries based on per capita and historic emissions" (Clémençon, 2016:6 - 7). The Paris Agreement thus worked out to the interest of both the United States and China as their hierarchic positions began to change. By designing an agreement that emphasised that all countries are to bear responsibility, albeit based on national circumstances, the USA could reduce the likelihood of other countries attaining relative gains and cheating, and instead the Agreement could meet the USA's national interests.

States respond to the distribution of power in the anarchic international system and have to consider other states' positions relative to themselves, but likewise pursue those policy objectives that can enhance their power and security by enhancing their material capabilities and latent power. Yet, the particular circumstances that administrations find themselves in can either hinder or enhance their ability to do so by influencing the costs and benefits of various actions, alongside concerns for other states' ability to cheat and attain relative gains. The Obama administration has sought increased cooperation in the UNFCCC since 2009 as a means to enhance US power and compete with its rivals. Although it struggled to attain this goal in the Copenhagen negotiations, by the negotiations in Paris in 2015, it was able to have a position in the UNFCCC that was less circumscribed. Since 2012, the increased domestic

[157] On the 22nd of April 2016, the United States and China were the first nations to sign the Paris Agreement on the first day that it opened for signature, a move of joint resolve that was intended to spur other countries to sign the Agreement as soon as possible (Davenport, 2016).

production of shale gas has led to a resurgence in US manufacturing and other sectors while its emissions have declined in the transportation sector, thereby delinking the long-term trend of economic growth and a correlated increase in emissions, while its energy security and economic competitiveness were enhanced (Fielden, s.a.). This had important implications for the US position by enhancing its ability to produce an agreement in the Paris negotiations that would not disadvantage it structurally while giving its hegemony the necessary leverage to persuade other states to cooperate since the costs to the US economy have been reduced as a result of the above-mentioned trends. The Obama administration's energy policy reflected the changes which took place in the USA due to the increased production of shale gas. The Obama administration could rely on executive actions encapsulated in the Climate Action Plan (CAP) and the Clean Power Plan (CPP) to build on the effects of the increased production of shale gas and to pursue the objectives that it established at the start of this administration related to augmenting US power through the synthesis between economic growth and environmental regulation to enhance its ability to compete with China as well as other rivals in the international system.

7.6.2 Domestic Influences

Achieving a successful agreement at COP 21 has been one of the highest priorities for the Democratic Obama administration (Kerry, 2015; Parker and Karlsson, 2018:520, 523; Clémençon, 2016:6). Therewith, the US stressed its willingness to assume leadership in the UNFCCC and secure an agreement in Paris (Tubman, 2015:3 - 4). The Paris Agreement had to match certain US specifications and the US delegation had to ensure this occurred and in the end, "(t)he new climate deal meets all key demands of the US" (Goldenberg, 2015; Dimitrov, 2016:8). Moreover, it has emphasised that major Greenhouse Gas emitting countries should be included in the agreement (Clémençon, 2016:6). At the unit level, the USA needed a particular kind of agreement, one that could be implemented in the US domestic system (Goldenberg, 2015). The Paris Agreement is the fruition of the Obama administration's climate efforts in the wake of the Copenhagen Accord and the non-existent cap-and-trade legislation (Goldenberg, 2015). In his remarks on the Paris Agreement, Obama announced that,

> "…the historic agreement is a tribute to American leadership. Over the past seven years, we've transformed the United States into the global leader in fighting climate change. In 2009, we helped salvage a chaotic Copenhagen

> Summit and established the principle that all countries had a role to play in combating climate change. We then led by example, with historic investments in growing industries like wind and solar, creating a new and steady stream of middle-class jobs. We've set the first-ever nationwide standards to limit the amount of carbon pollution power plants can dump into the air our children breathe…Now sceptics said these actions would kill jobs. Instead, we've seen the longest streak of private-sector job creation in our history. We've driven our economic output to all time highs while driving our carbon pollution down to its lowest level in nearly two decades…In short, this agreement will mean less of the carbon pollution that threatens our planet, and more of the jobs and economic growth driven by low-carbon investment." (White House (c), 2015).

At the unit-level, the Obama administration played an active role in designing the architecture of the Paris Agreement so that it could withstand Senatorial opposition (Goldenberg, 2015; Bodansky, 2015(b)). To circumnavigate this opposition, the Obama administration had to negotiate within existing demarcations and as a result opposed legally-binding mitigation targets and likewise opposed a concrete, long-term mitigation goal and the inclusion of a set deadline (Dimitrov, 2016: 3 - 4). Although under the Obama administration, US climate and energy policies have changed in contrast to preceding administrations due to this administration's policy-makers' perception of the compatibility between economic growth and environmental regulation and the reduction in costs within the context of an altered energy system in the USA, the Obama administration was deliberate in designing an agreement that could bypass Senatorial approval and thus it secured an agreement that was compatible with the USA's domestic structure (Clémençon, 2016:6). At the unit-level, the Senate continues to exert an influence over the negotiations since the interaction between the executive and the Senate "defines the scope for US pledges at Paris, as well as the prospects to fulfil them" (Bang *et al.*, 2016:215). As such, the Agreement had to not stipulate mandatory emissions targets for developed countries unlike the Kyoto Protocol of 1997 (Clémençon, 2016:6).

The issue of legality has been a key source of concern for the USA in Paris, and throughout the negotiations. Unlike international law, under US domestic law, the term treaty narrowly refers to an international agreement that requires the Senate's advise and consent to ratification as part of Article 2, Clause 2 of the US Constitution (Bodansky (a), 2016). While

the EU insisted that the INDCs be legally-binding, the USA opposed this notion - alongside China and India (Bodansky (a), 2016). Should the INDCs have been formulated in legally-binding terms this would have placed a similar legal status on the INDCs as the Kyoto Protocol's emissions targets, which could not be supported by the USA (Bodansky (a), 2016). The USA did agree with the EU that the INDCs should be formulated in strong procedural obligations such as the mandate to communicate each country's INDCs every five years as well as to provide an overview of the efforts to implement and achieve INDCs (Bodansky (a), 2016).

The USA pointed out that should the agreement be legally-binding, its effectiveness may have been undermined had fewer countries chosen to participate, or otherwise produced watered-down INDCs (Bodansky (a), 2016). Additionally, the legal character of the Paris Agreement was a concern for the USA since it would have influenced its ability to be part of the agreement as part of its domestic political process (Bodansky (a), 2016). At the federal level, depending on the type of agreement produced in Paris, the USA had to be concerned about the legal nature of the Paris Agreement to the degree that it contained obligations that were already approved by the Senate, complemented current US law, or that the obligations were procedural (Bodansky (a), 2016). In the end, the USA was able to secure an agreement that did not require the executive to exceed his authority (Bodansky (a), 2016).

In the US domestic context, there have existed two ideational frameworks related to climate change mitigation and energy policy that have influenced policy goals due to the costs associated with such policies and their consequences for the US economy. After a forty year stalemate, a notable change occurred between the Obama administration's first and second terms in office in its approach to climate and energy policies. Not so much the perception and the ideas related to its policy goals, but rather the context in which policy is designed changed. That is, changing material circumstances enhanced the Obama administration's ability to cooperate in spite of Congressional opposition because of altering costs related to material incentives.

While achieving international leadership on climate change has been paramount to the Obama administration, US energy policy creates the context for assessing the costs, benefits and trade-offs of such actions. Historically, amongst the congressional and executive branches within the US federal system, the main argument against climate change mitigation was the cost to energy and the economy (Parker *et al.*, 2011). The increased production of

shale gas and oil altered the policy environment by achieving three related policy goals: (i) reducing US dependence on foreign petroleum, (ii) reducing US GHG emissions, and (iii) strengthening the US economy (QER, 2015:1-6). This altered the policy context by diminishing the trade-offs between the goals of economic growth and environmental regulation. Although there was a reduction in the costs that would have resulted from the acceptance of a climate change agreement, at the federal level the Obama administration still had to design such an agreement within the parameters set by Congressional opposition and had to make use of executive actions to enhance its goals towards energy policy and the UNFCCC. Per consequence, the Obama administration had to make certain that the design of the Paris Agreement was legally non-binding, distributed mitigation obligations to developed and developing countries and whose actions were grounded in national circumstances. Thus, while the Obama administration was less inhibited in pursuing its domestic and international policy goals because of the changing costs of such actions in relation to system-level constraints and opportunities, at the unit-level, important constraints still remained in place that would influence the final policy outcome.

Therefore, in spite of this progress, the US political system continues to be divided over climate change since certain actors and constituent interests continue to view its mitigation as an unnecessary cost with negative consequences for the US economy. Because of this opposition, the Obama administration had to make use of executive actions, namely the CAP and the CPP to circumvent Congressional opposition and inaction, and attain its goals at the COP 21 negotiations. The historical development of US energy policy that centred on a set of economic assumptions to enhance US economic growth by maintaining low energy prices *in lieu* of higher capital and labour costs to enhance US competitiveness in global markets has heightened the resistance to the incursion of environmental regulation in order to maintain this competitiveness. In spite of favourable circumstances, domestic politics determine the extent and the form in which certain types of policies can be implemented.

7.7 Linking the USA's Energy Policy and Position within the UNFCCC

By the Obama administration's second term in office, the USA's energy system had changed significantly, and impacted the USA's energy policy. This had considerable implications for mitigation and the position of the USA in the global climate change negotiations since economic growth was uninterrupted yet, since 2005 the USA's annual net emissions were reduced by 1.3% on an annual basis (CAR, 2016: 9-10). The most important changes related

to the decline of the USA's dependence on foreign petroleum, and increased domestic production and consumption of natural gas which also led to a decline in the USA's emissions. Thereby, US dependence on foreign sources of petroleum has declined, and was at its lowest level since 1971, while its gross domestic product (GDP) has grown by 13% between 2005 and 2014 (QER, 2015:1). In reaction to these events, the USA's energy policy altered from concerns surrounding increasing prices and imports, and instead US energy policy focused on the quantity and the type of energy that should be set aside for export, the increased uptake and generation of renewable energy in numerous countries, while considering how the transformation in US energy supply and demand could be attained for the USA to mitigate global climate change reflecting altered material circumstances (QER, 2015:1). Within this context, the objectives that the Democratic Obama administration wanted to achieve were intended to meet the challenge of China's ascent in the international system, while circumventing Congressional opposition, and enhancing US security and power in the international system (Hirschfield and Davenport, 2015; Bang *et al.*, 2016; Johnson, Cha and Searight, 2016). This administration's policy-makers' perception was influenced by the compatibility between economic growth and environmental regulation which had been augmented through the reduction of costs associated with such goals and the benefits for the US economy (QER Report, 2015:1; Minsk, 2017:5). At this point the changes in the US energy and legislative systems could allow the Obama administration to make use of executive actions at the unit-level to put in place the necessary measures to meet their objectives in the international system. The CAP, the All-of-the-Above-Energy Strategy, and the CPP reflected the changes that occurred regarding the enhancement of the USA's energy security, economic growth and ability to mitigate climate change, which enhanced the Obama administration's ability to meet their objectives based on policy-makers' perception of the reduced costs to the US economy but at the same time in the midst of constraints found at both the domestic and international systems.

In this regard, since 2013, the Obama administration has enacted two pieces of legislation not requiring Congressional approval but having wide-ranging implications for energy and climate change policy as well as outcomes in the UNFCCC: the Climate Action Plan (CAP) and the Clean Power Plan (CPP). At the structural-level, the significance of US energy policy is that the Obama administration was able to utilise US energy policy to influence the dynamics of the UNFCCC and enhance US leadership therein relative to other states (Parker and Karlsson, 2018:525). Within this context, US energy policy was designed in response to

the USA's competition with China which placed emphasis on a transition to a low carbon energy system but within altered material constraints (The Economist, 2014; Hirschfield and Davenport, 2015)). The enhancement of the USA's energy security, the reduction of petroleum imports and the increased domestic production of natural gas which could facilitate the transition to a low carbon system, along with the reduction of the costs of mitigation which also did not impede economic growth, altered the economic and security implications of different policy actions while the Obama administration could rely on these changes to influence other states on the basis of the USA's hegemonic position within the international distribution of power ((Mitchell, 2013; White House, 2013; Freed and Fitzpatrick, 2012:3; All of the Above, 2014:2). One crucial aspect of the USA's focus on assuming a greater leadership role within the UNFCCC under the Obama administration is motivated by its competition with China driven by the economic and technological change that have been alluded to throughout this chapter.

While a great deal of policy change occurred during the Obama administration's second term with the changes that occurred in the US energy system, at the unit-level, US energy policy reflects the constraints of Congressional opposition and inaction which necessitated that the Obama administration rely on executive actions to circumvent Congressional opposition towards the enhancement of climate change mitigation and renewable energy technologies that would be based on market-based solutions (Robinson, 2013:1; Leggett, 2014:1; Bang *et al.*, 2016:215;). Significantly, at the unit-level, in spite of the changing costs related to different policy goals, the divergences between the executive and Congress continue to influence the politics around energy policy and climate change in the USA, and policy outcomes. At the unit-level, establishing such federal legislation was necessary as it would facilitate the USA to become a signatory to a global climate agreement that would be based on domestic support (Robinson, 2013:2).

The Paris Agreement was a historical turning point in the climate change negotiations. Although the Paris Agreement reflected increasing cooperation between China and the USA, it was still based on their rivalry within the international distribution of power and the significance of cheating and relative gains for the ability of the USA to cooperate (Bodansky, 2015(b); Oberthür, 2016:4 – 6). As such, the USA was willing to reduce its emissions on the condition that other states pursued similar goals while its cooperation with China was driven by the need to secure China's agreement to reduce its emissions. While the distribution of power in the international system has altered to reflect the growing influence of developing

countries, especially China, changes in the USA's material context permitted the Obama administration to pursue its policy goals with fewer costs incurred to the US economy. As a hegemonic state, the Paris Agreement reflects the USA's national interests, however, alongside China's ascent within the international system that has likewise also seen an alteration in its national interests, and the USA and China developed the major provisions within the agreement (Bodansky, 2015(b); Oberthür, 2016:4 – 6).

From a theoretical point of view, this raises important considerations since realism contends that cooperation between countries is inhibited while liberal institutionalism indicates that cooperation is possible (Powell, 1991:1304). The differences between the two theoretical frameworks regarding cooperation arise from the emphasis that realism and liberal institutionalism place on relative and absolute gains respectively (Powell, 1991:1304; Grieco 1988:603). Realism emphasises that states will place more emphasis on relative gains leading to competitive interstate dynamics while neoliberal intuitionalism indicates that states focus on absolute gains in spite of anarchy (Powell, 1991:1305; Glaser, 1994-1995:50). Glaser (1994-1995:50) further argues that, "Anarchy discourages cooperation because it requires states to worry about the relative gains of cooperation and the possibility that adversaries will cheat on agreements. In short, the standard structural-realist argument predicts that cooperation between adversaries, while not impossible, will be difficult to achieve and, as a result, will be rare and contribute relatively little to states' well-being." However, it is not impossible for states to cooperate in spite of the emphasis placed on relative gains if the cooperation should increase a state's security, realism therefore does not preclude the possibility that cooperation rather than competition is possible, although it is more difficult to achieve and maintain than what neoliberal institutionalism may indicate (Glaser, 1994-1995:51). Mastanduno (1991:81) further indicates that hegemonic states may be less sensitive to relative gains considerations when cooperating with other states although when its "relative power declines" a hegemonic state will focus more on relative gains. Within realism, interstate cooperation and competition are complex, whose dynamics are reflected in the Obama administration's position towards the UNFCCC.

The Obama administration's goal was to assume a leadership role in the UNFCCC based on US hegemony and crucially, the CAP reiterates the importance of US leadership in the mitigation of global climate change (Percival, 2014:148, 149). Although different presidents have understood and applied US leadership in different ways, whether more as a cooperative or unilateral position, ultimately all administrations designed international regimes to meet

their national interests with changing international and domestic circumstances. Perhaps another way to think of US leadership is leadership as self-interest. Throughout the history of the negotiations, the US position has continuously reiterated its leadership, that is the US has engaged with the UNFCCC on its terms and structured its behaviour to meet its national interests as a reflection of its hegemonic position within the international distribution of power. The USA has relied on its hegemonic position to design the architecture of the UNFCCC, a role that has continued under the Obama administration, especially in light of the increasing influence of emerging economies on the negotiations and the architecture of the UNFCCC due to the changing distribution of power (Bang *et al.*, 2016:214 – 215; Parker and Karlsson, 2018:524). Although it could secure greater cooperation from other countries, in particular China whose changing position in the international hierarchy allowed it to have a different set of priorities in respect to previous decades, the Obama administration still had to design the Paris Agreement within the boundaries of senatorial opposition at the federal level (Goldenberg, 2015; Dimitrov, 2016: 3 - 4). It could thus use the increased leverage that it gained from the above-mentioned change in legislation and the energy sector to secure an agreement that was legally non-binding, distributed obligations to all Parties, and whose actions would be based on domestic circumstances (Goldenberg, 2015).

At the structural level, this was intended to enhance US leadership within the negotiations in response to the USA's rivalry with China (Oberthür, 2016:4 – 6; Bodansky, 2015(b)). This leadership role was facilitated by energy policy goals which were based on the perception of the reduction in costs to the US economy and therefore the enhancement of US hegemony related to the minimisation of the costs associated with the mitigation of climate change indicating the importance of the material context within which policies take place. However, such actions were facilitated by the use of executive action in light of Congressional opposition. This Congressional opposition was influenced by worries related to the negative costs to the US economy as a result of the environmental regulation mandated by the UNFCCC and the relative gains accrued by US rivals and the possibility that these states will cheat and therefore structurally disadvantage the USA (Goldenberg, 2015; Bang *et al.*, 2016:214 - 215). What the above analysis illustrates is that the US federal system influences an administration's ability to cooperate within the UNFCCC in response to the changing distribution of power as the USA attempts to maintain its hegemonic position and design policies to suit its self-interest.

At the unit-level, the Obama administration had to pursue a position in the negotiations that could result in an agreement that could be accepted within the USA's domestic system (Goldenberg, 2015; Bang *et al.*, 2016:214 - 215). The Paris Agreement had to meet certain US specifications, especially with the distribution of responsibilities and obligations to all Parties reflecting a continuous focus on the importance of relative gains (Goldenberg, 2015; Bang *et al.*, 2016:214 – 215; Bodansky, 2015(b)). Although the Obama administration had more leverage in the negotiations through the use of executive actions in the midst of changing material circumstances to meet its energy policy and UNFCCC goals, the final agreement had to be able to withstand Congressional opposition (Bodansky, 2015(b)). At the structural level, the USA as a hegemonic state, designed the Paris Agreement to reinvigorate US leadership and therefore enhance its influence over the international system in response to the ascent of China (Tubman, 2015:3 – 4; Parker and Karlsson, 2018:524). The use of executive actions at the federal level would facilitate the Obama administration's ability to attain its goals in both the UNFCCC and US energy policy. The Obama administration nevertheless had to adhere to the structure of the USA's domestic system through its use of executive actions and the kind of agreement that the USA could accept in Paris (Goldenberg, 2015; Bang *et al.*, 2016:214 – 215; Bodansky, 2015(b)). The Obama administration responded to challenges and opportunities at both the structural- and unit-levels, with the two levels interacting to produce an outcome at the UNFCCC and US energy policy that was intended to meet the challenge of the changing distribution of power and the USA's role therein, while reflecting the challenges embedded in the USA's domestic system pertaining to divergences regarding the costs of different policy goals and the historical development of US energy policy and its position in the UNFCCC.

One can gain insights into the interactions between two levels when contrasting the Paris Agreement to the Copenhagen Accord. That is, while the structure of the international system remained constant, the Obama administration could make use of important new opportunities at the federal level related to an altered material context because of the increased production of shale gas and executives actions to attain its goals. Power relations with Congress remain important constraints on an administration's development of its policies.

7.8 Conclusion

The start of the Obama administration's first term in office in 2009 coincided with a time of turmoil in the USA as the Global Financial Crisis of 2008 represented the worst economic

recession since the 1930s. It appeared unlikely that the Obama administration would be able to develop an innovative energy policy. However, this administration would instead design the American Recovery and Reinvestment Act of 2009 which tried to merge the mitigation of climate change while simultaneously enhancing economic recovery, which was an endeavour to solve two goals that historically were viewed as incompatible. The support for renewable energy was further sought in order for the USA to compete against China in this issue area. These policies were thus designed as a means of enhancing US leadership on the international stage which was paramount for the Obama administration. Yet, Congress would stall the passage of the cap-and-trade regime which was intended to reduce US emissions by more than 80% by 2050. For the duration of the Obama administration's first term, it had to be content with pursuing its policy objectives within the narrow confines established by Congress. With the inability to secure the cap-and-trade regime in 2009, the United States would negotiate from a weak position in the Copenhagen negotiations at the end of the same year, as well as clash over the design of the agreement with strong emerging economies, China in particular.

However, by 2012, the USA's increased production of shale gas, alongside trends towards environmental protection and the procurement of renewable energy technologies that began to change in the 2000s, would alter the policy context and have important implications for the USA's domestic and foreign policies. That is, three important trends occurred: the US dependence on petroleum imports diminished, and its economy has grown while its emissions from the transportation sector decreased. By it second presidential term, the Obama administration could make use of executive actions, namely the Climate Action Plan (CAP) and the Clean Power Plan (CPP) to pursue its objectives of enhancing economic growth, environmental regulation and international leadership. This would also assist this administration to enhance its leadership and attain its goals in the UNFCCC.

Under the Obama administration, the historic Paris Agreement was accepted by the international community, signalling a turning point in the evolution of the UNFCCC. Its promotion of nationally determined actions, and the distribution of responsibilities to all countries, bears the closest resemblance to the USA's position in the UNFCCC. The transformation of the USA's political economy because of the increased production of shale gas has allowed the USA to gain the necessary position to establish the design of the Paris Agreement and have other countries agree to its demands. Therewith, the Paris Agreement is a reflection of the changing political and economic circumstances that have occurred both

domestically and internationally and is perhaps a more pragmatic framework to mitigate climate change when contrasted to some of its predecessors (Levi, 2015; Davenport, 2015). Yet, the Senate still exerts an influence on the type of agreement that the Obama administration could design, since it had to preclude legally-binding obligations on the United States and distribute obligations to both developed and developing countries (Leggett, 2015).

Chapter 8

Conclusion

8.1 Introduction

Policies at both the domestic and international levels reflect the historical circumstances faced by decision-makers as they attempt to grapple with multiple and conflicting pressures. Since 1992, successive US administrations have displayed varying degrees of cooperation towards the UNFCCC that have been based on the domestic and international distribution of power, and critically their perception of the related costs and benefits of pursuing a set of policy goals. Although a caricature of the US position within the negotiations would merely narrow it to an obstructionist actor that impedes progress and cooperation therein, this however is an incomplete picture. Rather, the positions of various administrations have been highly nuanced and complex, and thereby their ability to cooperate within the negotiations has altered on the basis of a number of highly intricate factors.

Since the combustion of fossil fuels for energy production is a major contributor towards anthropogenic climate change, any attempts to mitigate climate change would have serious implications for the USA's economic growth and competitiveness, and per consequence economic position, which historically have been based on cheap fossil fuel prices instead of higher labour and capital costs, in spite of the externalities[158] associated therewith. Since the 1970s, efforts to design US energy policy to factor in environmental externalities have resulted in protracted progress as two ideational frameworks emerged, one that viewed economic growth and environmental regulation as compatible, and another that promoted the opposing view, which has resulted in stalemate and a cyclical approach as various administrations supported either one or the other position. The result has been a highly erratic approach towards any attempts to reconcile US energy policy and climate change mitigation within the UNFCCC since successive administrations were involved in a two-level game in their attempts to meet domestic and international goals within US energy policy and the UNFCCC negotiations.

[158] This underlying perception, which is based on mainstream economics, usually excludes the external costs of fossil fuels - renewable energy is able to "reduce externalities by at least USD 1.2 trillion" (The National Academies, 2009:1; IRENA, 2016:1).

The highly fragmented US political system combined with contrasting ideational positions has resulted in a schizophrenic approach towards energy policy involving often irreconcilable viewpoints amongst actors. Successive administrations have adopted varying foreign policy positions based on the global and domestic distribution of power, and their particular perception. The result is that the USA has responded to the global climate change negotiations by pursuing a set of unilateral, bilateral as well as multilateral measures both within the UNFCCC but also within regimes that it has designed. More often than not, the US Senate has proven to be ambivalent and obstructionist towards both policy areas (Hovi *et al.*, 2010:4). The USA's role is thus far more complex than what critics may be willing to acknowledge. Structural realism asserts that it is the relative distribution of power amongst states within the international system that determines the behaviour of states and maintains that security and power remain the primary goals of states within the international system (Gilpin, 2001; Russett, 1979:192). Although this assertion has been reinforced by the findings of this study, a number of intervening variables influence states' response to the distribution of power and the policy goals that will be pursued in this regard.

This thesis has grappled with understanding the interactions between US energy policy and its position in the UNFCCC. Toward this aim, the study has made use of the theory-guided case study method to interpret and understand this phenomenon in a qualitative, historical and interdisciplinary research design. By using neoclassical realism as its theoretical framework, the study has integrated two levels of analysis consisting of the unit- and structural-levels. The study has collected both primary and secondary data. Since the study is interpretive in nature, the research needed to rely on scholarly synthesis as well as inference and inductive logic to reach the main conclusions (Bearman and Dawson, 2013:253 and 256; Tong *et al.*, 2012:1). Since a vast array of state and private actors play a role in influencing both US energy policy as well as its official position in the UNFCCC, at the unit-level, the study has limited its examination to the relationship between the executive and Congressional branches of the US government since an important factor to influence the US position in the negotiations has been the Constitutional separation of powers between the legislative and congressional branches of government.

The complexity and multi-dimensional nature of energy and climate change politics in the United States have evaded a satisfactory analysis by scholars. Although various studies would trace the USA's participation in the UN climate change negotiations to either system-level (Schreurs and Economy, 1997:5) or unit-level (Bang *et al.*, 2012) variables, this

research has shown these arguments to be misleading and incomplete. Rather, it is the interaction between the unit- and structural-levels as described above that influence a multitude of issues ranging from climate change, energy and economic growth and that impact policy outcomes within the constraints presented by the international and domestic systems. How else to contrast more dissimilar policy positions of the administrations of George H.W. Bush (1989 – 1993), Bill Clinton (1993 – 2001), George W. Bush (2001 – 2009), and Barack Obama (2009 – 2017)? What accounts for such differences? While the international system remains an essential yet ultimately permissive cause (Waltz, 2001:232 – 233), it is a combination of perception and a nation's political system that act as a filter during a particular historical epoch to produce policy outcomes.

8.2 A Discussion of the Main Findings

In the following section, the thesis will elaborate on the insights that have been obtained within the above analysis. Within this thesis, the historical overview of this study allowed certain patterns to emerge which helps to illuminate certain aspects of US energy policy and its interaction with the US position in the UNFCCC within two levels of analysis. The study thus concurs with Jervis that, "Problems arise in a context and out of a history, and not all patterns are the product of careful or even conscious choice." (Jervis, 1988:320). To present the main findings of the study, the overview of the development of US energy policy within the preceding chapters indicates that the USA's current energy policy is historically rooted. During changing circumstances, it had to accommodate and meet trade-offs between the goals of economic growth and competitiveness, energy security, as well as environmental protection (Yacobucci, 2016). The hierarchy and tension between these goals has altered over the successive decades and amongst different administrations. In this regard, there are three issues that have been contested in US energy policy: the attainment and mix of energy sources, the redistribution of income and costs, and the role of government and regulation, leading to policy impasse between the executive and Congress within the USA's federal system (Yergin, 1979: 84, 89 - 90). Therefore, since policy-makers have access to limited and incomplete information that is further influenced by the inability to differentiate the costs and benefits of various policy goals, policy-making can at best be characterised by bounded rationality (Simon, 1983). Moreover, Gilpin reminds us that "...every benefit has a cost and in a world of scarcity painful choices must be made." (2001:24). An ideational division in the USA is evident wherein different administrations displayed divergent approaches to the costs of the hierarchic ordering of policy goals leading to a contestation of policy options. There is

nevertheless a degree of continuity characterising US energy policy with the historical significance of fossil fuels, petroleum in particular, influencing the development of US energy policy, along with the limited role for government regulation and the importance of free market operations. Within this historical context, different administrations have been circumscribed in their attempt to design energy policy by Congressional influence at the federal level often leading to contradictions arising within US energy policy.

The link between the cost of energy and economic strength is recognised and plays an important role in the US political context. The context in which policy-makers in the executive find themselves in relation to the international and domestic context, but also within the dynamics of the domestic and global energy systems, which in the US case, is characterised by a complex array of supply and demand trends, influence policy-makers' ability to attain their goals and impact policy outcomes. Changing circumstances within these areas can either impede or enhance the ability of policy-makers to pursue their goals reflecting that there is a multi-causal interaction of factors influencing policy-makers and policy-outcomes. However, the perception of policy-makers will influence their calculation of the cost of energy and the compatibility between the policy goals of environmental regulation and economic growth and influences their willingness to recognise opportunities and constraints in their approach towards policy goals. Within this configuration, the international system remains a permissive cause, while unit-level variables influence the scope and content of policy goals and what is permissible within a particular context (Waltz, 2001:232 – 233; Taliaferro *et al*., 2009:4-5). The approach towards energy policy is thereby politicised and polarised in the US context, with the interaction between US energy policy and its position in the UNFCCC reflecting the interplay of the complex factors outlined above. The US position in the UNFCCC is a reflection of the constraints and opportunities faced by policy-makers and their approach towards economic growth and environmental regulation wherein the historical context indicates the nuanced factors that would influence policy-makers.

As indicate in chapter three, since its industrialisation in the mid-nineteenth century, US energy policy would be based on three economic assumptions: (i) private industry, markets and capital are the basis for innovation and wealth, therefore competition rather than government regulation is required; (ii) there is a correlation between energy production and economic productivity therefore, the more energy is produced and consumed, the stronger the economy will be; and (iii) the price of energy would decrease as refineries and utilities

increased in size. Within this framework, due to the correlation between energy consumption and economic growth, whereby higher energy consumption is correlated to a higher Gross Domestic Product (GDP), access to and supply of cheap energy has been an important source of competitive advantage to the United States as an alternative to higher capital and labour costs (Parker *et al.*, 2011). Per consequence, historically US energy policy has been concerned with the focus on the goals of maintaining low energy costs for US industries and consumers, as well as energy security. Since the nineteenth century, the United States has had abundant and inexpensive energy resources which helped to maintain industrialisation and energy security during both World Wars, relative to other nations. Moreover, since the mid-twentieth century, the USA, through its hegemonic position, had an important role to play in the anarchic international system in maintaining access to and supply of Middle Eastern petroleum for its allies in the post-War era in order to limit Soviet involvement in these regions and solidify these alliances within the bipolar distribution of power. Within this context, the USA relied on diplomatic and military means to secure the supply of petroleum which were augmented by its bipolar rivalry with the USSR. The hegemonic position of the United States within the distribution of power in the international system allowed it to play an important role in stabilising world petroleum prices and energy security, and the re-building of its allies before the OPEC nationalisations.

During this era, the access to and supply of inexpensive petroleum would become a primary feature of US energy policy, and as shown in this chapter, this would somewhat limit the US government's support for other energy resources, such as coal, and the US government relied on international and domestic petroleum companies to attain its goals. As the USA's dependence on foreign petroleum increased, various administrations viewed this dependency with unease and implemented measures in an attempt to limit this dependency. Moreover, in the pre-1973 era, although the United States played an important international role which was based on its hegemonic position and rivalry with the Soviet Union in an anarchic system to secure the supply of petroleum, the federal government had a more limited role in the design of domestic energy policy. In addition, environmental externalities were not factored into the price of energy, allowing these to remain artificially low.

The OPEC oil embargo would have an impact on the design of US energy policy. It highlighted the vulnerability of the US economy to supply disruptions and altered the US trade balance to a deficit. This was made more complex in the bipolar distribution of power in the international system and the gradual decline of the US hegemonic position therein. The

role of the US government became more interventionist as it attempted to design an energy policy that could maintain a secure supply of energy and improve the USA's security in an anarchic system by enhancing its power in terms of its material capabilities and latent power. Although the executive administrations of Richard Nixon, Gerald Ford and Jimmy Carter attempted to alter the design of US energy policy in light of these new challenges, and emphasised either production or conservation strategies to enhance US security in an anarchic system, these administrations increasingly encountered Congressional opposition and inaction at the federal level which resulted in an incomprehensive approach to the challenges of the 1970s. Integrating environmental protection into US energy policy proved to be a formidable challenge since it was perceived as irreconcilable with economic growth, the basis of US power in the international system, as such measures were perceived to increase costs to US industries and consumers. The 1970s were thus a remarkable era in US energy policy for three reasons, there was a considerable amount of policy change which witnessed an alteration of the traditional role of government towards energy policy and was indicative of the gravity of the situation faced by policy-makers at the time; secondly, no standardised approach towards the crisis could be realised by these administrations, and significantly, as highlighted in this chapter, when faced with similar challenges and constraints at the structural-level and its distribution of power, these administrations emphasised different policy goals to manage the energy crisis highlighting that the international system is at most a permissive cause.

Crucially, this chapter demonstrated that after the oil shocks of the 1970s, a pervasive feature of US energy policy has been its concern with the USA's dependence on foreign petroleum because of its significance for the strength of the US economy, and the role it played in facilitating US hegemonic rise in the post-World War Two era. Since the oil crises of the 1970s, this has been a source of concern for all administrations because of the structural hegemonic decline that the increased price of petroleum would result in and the interrelated implications for national security and economic growth, and the position of the USA relative to other states within the international distribution of power. This would have far reaching consequences. Only in times of crisis, such as conflict and the oil shocks of 1973 and 1979, was there a fundamental change in the objectives of energy policy and the role of government– otherwise there is a remarkable continuity to US energy policy, that is an emphasis on the free market, limited role for government, and low energy costs for industries and consumers.

By the early 1980s, the international system was beginning to alter with the gradual relative economic decline of the USA (Painter, 2014:187). This decline was aggravated by continued US military competition with the Soviet Union, its financial support for the alliance order under its control, and increased government expenditures towards domestic services (Gilpin, 1987). The economic threat presented by Japan and European countries further undermined US structural decline in the international system (Mastanduno, 1991). While responding to the USA's structural economic decline and the shifts in the international system within the bipolar rivalry with the Soviet Union, the Reagan administration's response would be based upon its ideological predisposition which influenced this administration's policy-makers' perception of US energy policy. In this context, the Reagan administration strongly advocated the use of market measures to support energy security such as and the decentralisation of all government authority (Elliot, 2013; Axelrod and Wilson, 1991:841). While facing similar structural incentives to the Nixon, Ford and Carter administrations, the Reagan administration's ideological beliefs predisposed it to reduce the federal government's role so that the free market and the private sector were able to set priorities (Department of Energy, 1994:3). Thus, what was highlighted in this chapter was that during the 1970s and 1980s, while the logic of the international system compelled these administrations to aim for the goals of maintaining US competitiveness and energy security to enhance US power, security and its hegemonic position *vis-à-vis* its rivals within the bipolar distribution of power, these different administrations supported different policy responses towards their era's respective challenges and were circumscribed by Congress in the design of their policies. This chapter further indicated the centrality of inexpensive fossil fuels, petroleum in particular, for US energy policy during this era, as this was an important component of US competitiveness in international markets *in lieu* of higher capital and labour costs. Moreover, the ideational division related to the compatibility between economic growth and environmental regulation became a key policy debate in US energy policy and would subsequently have implications for the design of US energy policy and its position in the UNFCCC.

Chapters four to seven would emphasise the constraints imposed by the ideational assumptions surrounding the goals of US energy policy in relation to the perception of their costs within the federal structure of the US political system, which would establish the context US administrations would attempt to design the US position in the UNFCCC relative to other states within an anarchic international system that presents them with incentives and constraints. Since the late 1980s, climate change became an acute challenge to the design of

US energy policy due to its historical responsibility in the origins of the problem, as well as the perceived costs involved in its mitigation to the US economy, and per consequence the implications for its hegemonic position. As these chapters would highlight, although the USA would play a dominant role in the design of the UNFCCC because of its hegemonic position relative to other states, certain aspects of its architecture would prove to be extreme hurdles within the US federal system because of the possibility that it would have consequences for the US economy, undermine the USA's relative gains and enhance the prospects for cheating by other states. The perceived trade-offs between energy security and economic competitiveness on the one hand, and mitigation on the other, were made more complex with the introduction of ascending developing nations who were exempt from having to accept mitigation targets, while the USA would. The relative gains that would be accrued to these states and their ability to cheat would undermine the UNFCCC's efficacy as various US administrations would struggle to accept its conditions for the duration of its history. The limited ability to cooperate within the UNFCCC chiefly arises from the USA's response to the changing distribution of power, whereby its relative structural decline occurred with the ascent of its rivals, thereby it could not accept an agreement that would weaken the USA economically while strengthening its rivals by incurring costs to the US economy through the mitigation of climate change and the raising of energy costs. Under these circumstances, it is important to recall that states compete militarily and economically since the former depends on the latter (Waltz, 1993:45, 50).

It is at this point of analysis that the interaction of the two levels becomes highly complex. Throughout the historical period under analysis, policy-makers within these administrations had particular policy goals that they wanted to enact based on their perception of the costs associated with various policy goals within energy policy and their position in the UNFCCC but at the same time they faced unit- and structural-level constraints in their attempts to achieve this. The US position has – with a few exceptions – been based on the support of nationally determined actions rather than quantified, legally-binding mitigation targets, and objections to the principle of Common but Differentiated Responsibilities (CBDR), and in its place an emphasis that most countries should bear some actions in the mitigation of climate change.

At the structural level, in the beginning of the 1990s, the international system changed from a bipolar to a unipolar system, wherein the focus on defence capabilities subsumed somewhat while economic competition would become a key aspect of interstate rivalry and the pursuit

of power. Subsequently, at the Rio Earth Conference of 1992, the Republican George H.W. Bush administration favoured a cautious approach to the climate change negotiations, and mitigation in particular, thereby watering-down the resultant UNFCCC. As such, the resultant agreement was designed on the basis of the US hegemonic position and reflected many of its key demands since international institutions reflect the interests of powerful states. At the federal level, Congressional opposition over the high costs that could be incurred to the US economy and the implications thereof for US competitiveness would pressurise the administration to preclude the use of legally-binding mitigation targets within the UNFCCC and strongly influenced the US position therein (Parker *et al.*, 2011:3). As indicated in chapter four, according to the neoclassical realist framework, at the unit-level, the USA's ability to cooperate in and ratify the UNFCCC depended upon a bargaining process between the executive and Congress. The federal structure of the US political system enhanced the ability of Congress to impact the USA's cooperation in an agreement that would have implications for the design of US energy policy and potentially increase the price of energy in the USA. The interaction between the structural- and unit-levels configured to prioritise the USA's hegemonic position relative to its rivals, and to prevent its competitors from acquiring relative gains at its expense. These dynamics would impact the debate around US energy policy and its position in the UNFCCC at the unit-level. Although the Republican George H.W. Bush administration was less ideologically inclined and indicated that the market could not be solely relied on (Miller, 1995) and supported environmental regulation, albeit to an extent, indicating that theoretically, policy-makers can approach and perceive policy goals in nuanced ways; yet this administration was circumscribed by worries related to the cost of energy and US competitiveness, complicating the endeavour to comprehensibly integrate the mitigation of climate change into US energy policy, especially as economic competition became a prime feature of interstate dynamics with the demise of the military imperatives of the Cold War's bipolar order.

As discussed in chapter five, the subsequent Democratic Clinton administration, on the other hand, supported legally-binding mitigation targets which were endorsed by its hard law stance towards the climate change regime in the lead up to the negotiations for the Kyoto Protocol between 1995 and 1997. In this regard, the end of the Cold War and the subsequent unipolar distribution of power would have important implications for US domestic and foreign policies wherein, while there was still an emphasis on security, economic competition would become a central preoccupation. Hence, the perception of policy-makers within the

Clinton administration regarding the goals of energy policy focused on simultaneously linking environmental regulation, economic competitiveness and energy issues which led to the promotion of a BTU tax on the heat content of the fuel and the Climate Change Action Plan of 1993. At the structural-level, these policies were intended to reinvigorate the US economy especially in respect to the economic rivalry with Germany and Japan whose manufacturers had greater energy efficiency and thus lower production costs. However, at the federal level, Congress would not support the BTU tax citing concerns for the increased costs to consumers and industries and its implications for US competitiveness in global markets and thereby hegemonic position (Parker *et al*. 2011:7). While the Clinton administration supported the Kyoto Protocol, at the federal level, the Republican-dominated Congress impeded this citing that the USA would not accept an agreement that does not include developing countries, and that would harm the US economy. Congress thus impeded US participation in the negotiations on the basis of the altering distribution of power within the international system and the relative gains that could be gained by developing nations and the negative consequences for the US economy. In this regard, assessing the relative costs and benefits of different policy goals, and their implications for US power and security, reveals that different actors at the unit-level have divergent and irreconcilable views thereon which influenced the USA's domestic and foreign policies during the Clinton administration. Nevertheless, what the analysis of the Clinton administration highlights is that when faced by a unipolar distribution of power, this administration responded differently towards US energy policy and the UNFCCC than the Bush administration in its attempt to enhance the USA's competitiveness through its attempt to link environmental regulation and economic competitiveness. There is thus no one fit-all solution as to how policy-makers will respond to the incentives of the international system. However, in the US context, Congressional influence remains an important restriction on what different administrations can achieve both within their energy policies and the UNFCCC indicating that the structural- and unit-levels have a complex interaction.

After the relative stability of energy markets in the 1990s, the Republican George W. Bush administration would face a number of challenges in the 2000s as discussed in chapter six. In light of these challenges the Bush administration's energy policy primarily focused on the USA's dependence on foreign petroleum and its energy security. As indicated in this chapter, since at the structural level, an increasingly multipolar distribution of power would begin to be evident and therein, the risks to the USA's energy security increased in the midst of

competition with developing nations for an energy resource that is central for US hegemony, at the unit-level, the Bush administration favoured a pro-production strategy to meet these challenges. At the unit-level, this strategy was further based on this administration's policy-makers' ideological predisposition, and also the incursion of vested interests, which also limited this administration's support for environmental regulation. At the federal level, Congressional stalemate would limit the emergence of a coherent energy policy that could meet all the goals of this administration, especially related to the reduction of environmental regulation.

It was discussed in this chapter that within these dynamics, the Bush administration was unable to support the Kyoto Protocol as it was based on legally-binding mitigation targets while simultaneously designing an energy policy overtly based on increased fossil fuel production since policy-makers' perception supported this energy policy goal as a means of enhancing the competitiveness of the US economy by maintaining low energy costs, especially relative to its rivals. US energy policy was per consequence characterised by no proposal that the USA "would achieve the UNFCCC goal of returning greenhouse gas emissions to their 1990 levels" (Parker *et al*. 2011:8). This chapter highlighted that the confluence of these influences and challenges, as well as the historical importance of fossil fuel supply for US power and security in the anarchic system and the perceived high costs of mitigation, would lead the George W. Bush administration to not support the Kyoto Protocol, especially as at the federal level, Congress would not support the Kyoto Protocol either. US energy policy has always been influenced by the anarchic structure of the international system, since the main concern was enhancing US competitiveness, and thereby hegemony and security, in relation to other countries by enhancing the supply of low cost fossil fuel energy, but these policy goals, would be influenced by the federal structure of the US political system and policy-makers' perception of the costs that different policy goals would accrue to the US economy. In the midst of the challenges presented by the altering distribution of power in the international system and the relative gains that would be accrued to developing nations therein, at the unit-level, policy-makers' perception of the costs that mitigation action would accrue to US energy reduced the Bush administration's cooperation within the UNFCCC while the Bush administration supported market-based approaches towards the mitigation of climate change, technology cooperation and that such actions had to be voluntary and nationally-determined which was more feasible in the US domestic context.

As was discussed in the seventh chapter, during the Democratic Obama administration, the USA was still a hegemonic state, however the international distribution of power would be altered by the ascent of China at the structural level which threatened the USA's hegemonic position and security within an anarchic system. While the Obama administration claimed its support for the UNFCCC and environmental regulation at the start of its presidency, the global financial crisis of 2008, rising US emissions, and projections of increased dependence on foreign petroleum presented formidable challenges to this administration at the start of 2009. In this regard, to enhance US leadership in a number of related sectors and maintain its hegemonic position, at the unit-level, the perception of policy-makers within the Obama administration would advance policy goals that incorporated greater emphasis on renewable energy technologies and specifically a green economy framework to compete with China and other rivals, and to give the US economy a competitive advantage after the recession of 2008. Thereby there was an attempt to link energy and economic recovery with climate change in its energy policy - in a similar manner attempted by the previous Clinton administration - but in the midst of new trends wherein the goals of this policy were framed differently. Since the structural-level acts as permissive cause at most, its influence is filtered through the unit-level, whereby the Obama administration could not pursue its objectives due to Congressional opposition to the cap-and-trade regime at the federal level due to the costs that the legislation would impose as well as criticism of China's accumulating emissions. At the Copenhagen negotiations at the UNFCCC, the Obama administration focused on enhancing US leadership but found itself circumscribed by China and other developing nations whose influence at the negotiations had increased with the changing distribution of power, and consequently the divergences between the USA and China towards the "the architecture of a future legal regime" had a marked impact on the outcome at the Copenhagen negotiations (Legget, 2011:5). At the federal level, since Congress would not support the cap-and-trade regime, along with the continued historical influence of the Byrd-Hagel Resolution, the Obama administration entered the negotiations in a weakened position with implications for the resultant agreement (Bodansky, 2010; Leggett, 2011:4).

However, crucially, this chapter indicated that while the structure of the international distribution of power did not alter, the increased production of shale gas transformed the US energy system by the Obama administration's second term in office. A number of related trends were altered because of the increased production of shale gas, allowing for the trade-offs between economic growth and environmental protection to decrease, decreasing the

tension between the two competing goals that have besieged US energy policy since the 1970s. These trends, which altered material constraints, were combined with the Obama administration's use of executive actions at the federal level within the Climate Action Plan (CAP) and the Clean Power Plan (CPP) to pursue its perceived objectives domestically and internationally and to re-frame the USA's energy policy. Therewith, the USA was in a position to advance its objectives in the UNFCCC and to finalise the Paris Agreement at the Twenty-first Conference of the Parties (COP 21) although this agreement had to be designed in light of Congressional opposition at the federal level and thus had to include non-legally binding elements, distribute obligations to all states, and have mitigation actions be based on national circumstances. The elements of this outcome can be traced to the continuous concern with the maintenance of US hegemony and the distribution of power in the international system whereby in spite of the altered material constraints there is emphasis placed on not giving developing nations relative gains in relation to the USA and not diminishing its hegemonic position. The USA's rivalry with China and the necessity to regain US leadership in the negotiations at the structural-level indicated that the Obama administration had to find a new strategy to meet its objectives at the UNFCCC.

Significantly, the international distribution of power did not alter between the Obama administration's first and second terms in office, rather the Obama administration was capable of pursuing its preferred policy goals through a combination of executive actions at the federal level and minimised material constraints which reduced the costs accrued to US energy policy through the mitigation of climate change. Moreover, the USA agreed to limit its emissions on the condition that other countries pursued similar goals, indicating a continued emphasis on relative gains and cheating. As a hegemonic state, the USA played a key role in ensuring that the Paris Agreement reflected its key demands. While the USA designed the Paris Agreement on the basis of its interests, the agreement nonetheless had to be implemented in the USA's domestic system at the unit-level. There is thus a tension that the Obama administration had to face between the structural- and unit-levels since it had to ensure that the agreement was able to enforce the USA's national interest as a hegemonic state while been acceptable at the federal level with the agreement having to be permissible within the parameters of Congressional opposition.

Theoretically, neoclassical realism is advantageous in that it is far more nuanced than other forms of realism, as well as other theoretical frameworks in IR and in public policy analysis, because of its incorporation of two levels of analysis, this being the structural- and unit-

levels, and its overview of the manner in which the influence of the structure of the international system is filtered through unit-level factors, and therefore it can be applied to better understand complex policy areas such as energy policy and the UNFCCC negotiations. Neoclassical realism can therefore be used to better understand why it has been difficult to reconcile US energy policy and the UNFCCC position within altering unit- and structural-levels. The importance of neoclassical realism, much like other forms of realism, is that it highlights the importance of power at both the structural- and unit-levels, in influencing outcomes. That is, NCR highlights the contradictions between US energy policy and its position in the UNFCCC and the difficulties involved in estimating the perceived costs, benefits and trade-offs between mitigation and other policy goals within the ideational divide in the US federal system over these issues in the midst of structural constraints, and the power dynamics at both these levels. Since realism as a theoretical approach has had limited application towards non-traditional security threats such as climate change, the application of this theoretical framework towards energy policy and the climate change negotiations would have contributed towards the development of this theory. From a methodological point of view, NCR has the added advantage of being sufficiently rigorous to systematically study the interaction between the structural- and unit-levels while still being flexible and allowing the inclusion of concepts developed in other disciplines to inform analysis thus broadening the analytical scope of realism. The historical, interdisciplinary nature of this study was enhanced by the use of neoclassical realism as it could identify new and intricate patterns of interactions between US energy policy and its position in the UNFCCC as described in chapters four to seven and also highlighted above.

While the above analysis indicates that the basic assumption of realism are valid in that under international anarchy, cooperation is inhibited since states are concerned that others will achieve relatively greater gains and thereby become more powerful relative to themselves over time (Grieco *et al.*, 1993:729), it is nevertheless necessary to understand how these dynamics are influenced within the structural- and unit-levels. Although realist theory does not necessarily preclude that cooperation between states is possible, such cooperation is more difficult to gain and maintain (Grieco *et al.*, 1993:729). This is in contradiction to liberal institutionalism and its claims that international institutions facilitate interstate cooperation and that states are concerned about their absolute gains (Grieco, 1988:486). Furthermore, it is not always clear how states will determine what their relative gains are and how to make sense of the perception of the costs of competing policy goals that all have an influence on a state's relative gains. On the basis of the analysis undertaken within the thesis, this study

concurs with Grunding (2006:782) that should the relative gains within negotiations be big enough to be security relevant, cooperation between states is limited since the USA showed hesitation to cooperate within the UNFCCC due to the risk that the costs of energy in the USA would increase, thereby undermining its competitiveness, and fears that other states, especially developing countries, will attain relative gains and cheat, thereby undermining the USA's power and security within an anarchic international system.

This thesis has captured the contradictions of US energy policy and its foreign policy towards the UNFCCC. Thereby, the US position in the UNFCCC is influenced by its energy policy in three interrelated ways. When viewed within a historical perspective, all energy policies had unintended consequences that at the time were unforeseen by decision-makers during the design and implementation stages and whose effects subsequent administrations had to find solutions for in the midst of new challenges, leading to more contradictory options. Moreover, US energy policy is historically based on a set of economic assumptions which most administrations have closely adhered to. This is made more acute by the federal structure of the US political system and its two party system, and the ideological positions of its two dominant parties, Democrats and Republicans which influence the perception of the costs related to US energy policy and its position in the UNFCCC while Congressional politics have often acted as a constraint on the development of a comprehensive US energy policy. The historical role of low energy prices in enhancing US competitiveness, and per consequence its hegemony, has become an important policy goal that often subsumes those goals that appear to undermine it. In this regard, petroleum has historically occupied a central position in US energy policy due to its low cost, but also the influence that it allows the USA to have both within the Middle East and over its allies. In light of new challenges, the confluence of these factors has made the task of integrating contradictory policy goals strenuously acute. As a consequence, the main ideas presented towards the design of energy policy continue to be disputed because of policy-makers' differing perceptions of the costs associated with these policy goals. This had significant implications for the US position in the UNFCCC negotiations. It may be surmised that in the US context, energy security is a matter of economic security. The irony is that the pursuit of power often makes a state more insecure. What is often taken for granted in analysing US global climate change politics and its mitigation is the role of intellectual and ideological differences amongst administrations concerning the perceived costs and benefits of such actions and the related hierarchy of policy objectives in this attainment *vis-à-vis* Congressional support or

opposition. It is thus policy-makers' perception which forms the link between the structural- and unit-levels.

At the unit-level, ideology has been an important influence on perception, with ideology influencing policy preferences (Mirilovic and Kim, 2017:179 - 180). The influence of ideology on perception can be attributed to its ability to act as a category through which events are interpreted thus forming an informational shortcut (Mirilovic and Kim, 2017:180). As such, Democratic administrations are more supportive of environmental regulation, and its ability to enhance economic growth, within US energy policy, and thus are more likely to support cooperation with the UNFCCC, in contrast to Republican administrations. Political polarisation related to these issues has also been a significant influence on Congressional politics (Schmalensee and Stavins, 2018:4). Nevertheless, what administrations may aim to achieve must be situated within the US federal system and the restrictions therein on the ability of administrations to pursue their preferred policy goals.

US energy policy and its position in the UNFCCC are characterised by short-term planning as each administration designs its policies within the time it is in office. However, the intricate problems faced by the US energy system and the requirements of mitigation require stable, long-term solutions. As an analogy, US energy and climate change politics can be thought of as a game of snakes-and-ladders, as one policy replaces another every few years with the introduction of a new administration, leading to a revolving-door policy cycle and incremental progress rather than continuous development.

From a theoretical perspective, it is important to consider which level of analysis accounts for which outcome in a general sense. Broadly, the international system provides the incentives and constraints that decision-makers respond to, but which are then interpreted through intervening variables found at the unit-level to influence policy outcomes in terms of scope and content. The US position in the climate change negotiations is the result of the interplay amongst its domestic and international policies. Four consecutive administrations have displayed varied positions within the negotiations but ultimately were circumscribed by their domestic politics by Congress within the federal political system regarding the goals of energy policy and the US position in the UNFCCC in the midst of a changing distribution of power. Within the constraints provided by the domestic system at the unit-level, the international system provides the incentives that policy-makers heed in their policy formulation. What complicates any analysis of the USA's position within the UNFCCC is that

the politics surrounding these dynamics within the United States are highly contested and intricate. Rose articulates this by stating that (1998:147), "…systemic pressures and incentives may shape the broad contours and general direction of foreign policy without being strong or precise enough to determine the specific details of state behavior."

Both the executive and Congress responded to the changing distribution of power within the international system and the US hegemonic position therein which formed the broad goals of energy policy and its position within the UNFCCC. These goals related to the need to maintain energy security and low energy costs which were needed to maintain US competitiveness relative to its rivals in order to maintain and enhance US hegemony and security within an anarchic international system. That is, policy-makers designed policies in response to the changing distribution of power and likewise halted policies that were deemed to undermine US hegemony while giving its rivals a source of relative gains. While the broad goals in relation to the distribution of power were evident, that is the maintenance of US hegemony, power and security, relative to its rivals within the international system, the scope and hierarchy of competing policy goals based on the perception of the costs associated with these goals, was less easy to form consensus over amongst different administrations. The federal structure of the US political system acted as an important constraint in the adoption of policies that could diminish the US position within the international distribution of power.

The international system therefore determines the broad goals that US policy-makers are concerned with which are related to power, security and the need to maintain the US hegemonic position. While the international system provides a set of incentives and constraints to policy-makers, there does not exist a single approach as to the interpretation of these; nor in the precise manner that policy will be designed in response. In this regard, it does appear that the perception of the costs related to environmental protection and its compatibility with economic growth are important in influencing support for a particular policy design within the domestic and international context present at the time amid the perception of the costs borne to the US economy which is central for US hegemony. However, such policy goals are either facilitated or constrained by Congress at the federal level in response to the changing distribution of power in the international system which influence policy outcomes. The power play between the executive and Congress in response to the changing distribution of power sheds much light on the development of US energy policy and its position within the UNFCCC. In this regard, power relations play a critical role in determining policy outcomes.

The perception of costs, within the federal structure of the USA, help to gain insight within the neoclassical realist framework into what facilitates or complicates US cooperation within the UNFCCC. These insights contradict the notion that the observed behaviour of the USA is idiosyncratic. While it is difficult to form predictive generalisations, the ideational division in the US federal structure related to the cost of policy objectives influence policy design and outcomes, especially in response to the changing distribution of power at the structural-level. As such it may be surmised that this division will continue to exert an influence on US cooperation, and depending on the factors outlined in this study, either inhibit or promote US cooperation within the UNFCCC. The significance of the different perceptions of cost in the USA within the framework is that it highlights that there does not exist a standard, objective set of criteria that guide the estimations of cost in relation to US energy policy. Rather, different administrations exhibit widely different calculations of the cost related to hierarchic policy goals, which are influenced by ideology. Within this context, US policy-makers are situated within a complex, two-level game wherein they respond to the opportunities and constraints presented by the structure of the international system as well as the USA's domestic system and its federal-level politics and ideational division.

Although it relies on the logic of realism, neoclassical realism takes standard realist concepts and underscores their complexity, such as power, security and rationality. Having examined the historical development of US energy policies and its consequences for certain issue areas, the most poignant theoretical implication is for the assumption of rationality within Waltz's structural realism. Instead of an objective evaluation, decision-makers' response to system level constraints and incentives is highly unceirtain. Security is a fluid concept, and like energy security, it is also multidimensional (Baldwin, 1997:23). Likewise, security competes with other values, which often involves trade-offs amongst these and requires an analysis of its importance relative to other values (Baldwin, 1997:18; Ullman, 1983:130). Baldwin offers an important point to consider by arguing that security must be thought of in terms of "…which values to protect, from which threats, by what means, and at what cost" (1997:23). Rothschild (1995:57) reminds us that, "The new political preoccupation with these old ideas corresponds…to new political interests." The close relationship between security and ideology may allow security to be easily manipulated. By classifying a phenomenon as a security issue, the phenomenon acquires a sense of urgency which requires some form of political intervention, usually for ideological purposes. The close association between security and vested political interests remains the grey area in the analysis of the utility of security in

modern society (Rothschild, 1995:57). Security as such is used as a guide to the sort of policies that government should design (Rothschild, 1995:57).

As a final remark, the thesis would like to ponder upon three lessons that have been gleaned from this study. Firstly, there is no standard approach through which policy-makers will be able to evaluate energy policy, nor international opportunities and threats. Rather than an objective set of criteria, policy-makers are influenced by a complex range and interaction of factors in their approach to energy policy, international negotiations, as well as international opportunities and threats, especially given that decision-makers can at best have incomplete and limited information which impacts their ability to differentiate the costs and benefits of different policy goals. Secondly, the structure of the international system is essential in understanding state behaviour. The influence of the distribution of power in the international system therefore complements domestic factors in analysing the motivation and behaviour of policy-makers acting on behalf of the state. The international system; however, acts as a permissive rather than as a necessary cause, and it is imperative to understand how its influence is filtered at the unit-level (Waltz, 2001:232 – 233; Taliaferro *et al*., 2009:4-5). Thirdly, showing a sensitivity for the historical context permits deeper insights into the multi-dimensional influences on decision-makers. It is therefore necessary to delve into the historical origins of state behaviour and the evolution of their domestic and foreign policies.

8.3 Limitations

There were two main limitations faced by the study which will now be reflected on. These limitations relate to the macro-level processes that the study focused on and the limitations within the theoretical framework adopted by the research. Firstly, the macro-level approach of the study has required that certain variables and processes be excluded in the analysis. This broad sweep has precluded the analysis of fine-grained processes that can better be analysed in micro-level studies. There were thus certain limitations within the methodological framework in its application to gain insight into the more micro-level aspects of US energy and climate politics such as the influence of various vested interests and the roles played by national and sub-national departments as it analysed broad-based, historical patterns. As such micro-level trends could not be incorporated into the study due to their scale, and the study's objectives. Within these micro-level trends, it was also not possible to include in greater depth the influence of other actors on US energy policy and climate change position such as the various US federal departments, US states, vested interests, and constituents; and while

these aspects were observed at an aggregate level, the limitations of space and focus did not permit an in-depth discussion of these. Moreover, as the focus of the study was on the distribution of power in the international system and the perception of costs[159] within the federal US system, other influences on the executive regarding the above-mentioned areas could not be included.

Secondly, the use of neoclassical realism[160] presents particular challenges. The integration of two levels of analysis and deciding which variables to include and how these ought to be combined formed limitations to the use of this theoretical framework in a more coherent manner. The *ad-hoc* approach to this application of levels and variables made the theoretical application clumsy. A careful consideration had to be made of which variables should be included as part of the unit-level analysis. By developing an interdisciplinary and historical study, the development and use of neoclassical realism was made analytically coherent through the integration of energy policy goals (Hall, 1993:278). It could thus be emphasised that a multi-causal interaction of factors influence US domestic and foreign policies.

The approach did not permit a greater analysis of the various areas of these policy domains due to the limitations of space. Since US energy policy and its position in the UNFCCC are multifaceted policy areas involving numerous actors at both the national and sub-national levels, this required a careful assessment of which aspects of US energy policy and its position in the UNFCCC would be analysed within the thesis. By analysing historical processes in combination with the integration of concepts from different sub-disciplines, the study could indicate the broad themes that have characterised the interaction between US energy policy and its position in the UNFCCC, as well as the synergies and trade-offs between the two arenas.

The random integration of variables therefore remained one of the main weaknesses of the neoclassical realist framework and finding a manner to overcome this challenge was a key issue that this study grappled with. The thesis was able to develop a framework consisting of carefully selected factors at the unit-level to analyse while being aware of the complexity of these policy areas. Nevertheless, the flexibility of this theoretical framework lent itself to

[159] It should be noted that in the study, costs refer to monetary estimates (Parker *et al.*, 2011).

[160] The thesis would like to highlight that the use of neoclassical realism has been adapted in this interdisciplinary, historical study and as such has being used differently to what may be expected in a traditional political science and IR studies.

identify concepts from other sub-disciplines that could allow the analysis to be carried out in a more systematic manner while identifying novel patterns that would have been missed had a more traditional approach been undertaken. In order to limit the haphazard selection of variables, unit-level variables based on the federal level structure and differing perceptions are integrated by tracing the link between a) the goals of energy policy and b) the US position within the UNFCCC, along with the impact of the distribution of power at the system-level on the goals of US energy policy and its position in the UNFCCC. Due to the ability of neoclassical realism to identify nuanced interactions, it is able to reveal the opportunities, difficulties and contradictions involved in reconciling US energy policy and the UNFCCC position within the US political context due to policy-makers' perception therein regarding the cost accrued to the US economy through the estimation of the costs, benefits and trade-offs between mitigation and other policy goals within the ideational divide in the US political system over these issues. While neoclassical realism has its strengths, there are certain processes it cannot account for such as the more complex interplay between domestic factors at the unit-level and which are isolated from the influence of a state's position in the relative distribution of power in the international system. The use of other theoretical frameworks may be beneficial in accounting for these such as constructivism and theoretical frameworks in the policy process literature.

8.4 Recommendations for Future Research

There are a number of avenues that future research can profitably explore. While this particular research focused on decision-makers' perception along with its implications for energy policy, other important intervening variables include the role of state institutions, and non-state actors such as the media, think tanks and non-profit organisations and their influence on the US position in the UNFCCC negotiations. While this study focused on broad macro-level trends, analysing micro-level trends may yield important theoretical and empirical evidence. In this regard, analysing the role of vested interests, especially those with contrasting sets of goals such as the fossil fuel and renewable energy industries, in influencing both domestic and international policies, can be beneficial in increasing scholarly understanding of the policy process. Another important area of scholarly research could be a comparative study of the security implications of the UNFCCC and similar negotiating spheres and their implications for the determination of relative gains by decision-makers.

The findings of the study may be used to interpret the evolution of other countries' energy and climate policies. By highlighting the importance of the historical context, domestic political system along with the ideational predisposition of policy-makers and how power relations between different sets of actors entrusted with policy formulation results in policy outcomes within the international distribution of power and states' positions therein, it is possible to gain insight into how alternating administrations will respond to policy proposals within an alternating distribution of power at both the domestic and international levels. Countries such as Australia, Canada, South Africa and the United Kingdom would be important avenues for research in this regard either in a historical case study or within a more comparative approach.

8.5 Final Reflections

Anthropogenic climate change has emerged as an important policy preoccupation as compelling scientific evidence has shown the negative consequences that this will have for societies in decades to come. Yet at the same time, it has also revealed the difficulties that the international community has in finding its solution in global multilateral forums as evidenced by the haphazard results of the United Nations Framework Convention on Climate Change (UNFCCC) as self-interested actors will remain concerned with their relative gains and fears of cheating. The history of the United States' position in the negotiations and the analysis of the influences on this position reveal that simple mono-causal explanations cannot satisfactorily attribute the differences amongst US administrations therein. Rather, a multi-causal set of processes based on ideational differences amongst these administrations within the constraints posed by the domestic and international system influence both domestic and foreign policies.

This thesis has provided a historical overview of the intersection of energy policy and the UNFCCC negotiations in the United States in the 1989 to 2015 time frame. Creating a comprehensive policy that can effectively respond to the challenge of global climate change mitigation is complex because such a policy would essentially restructure the internal political and economic structures of states (Paterson and Grubb, 1992:294). Domestic constraints, *à la* the two-level game, place an important limitation on US participation and ratification of climate change agreements and highlights the important role played by domestic institutions with bipartisan politics forming a staggering fissure (Bang, 2011; Bang *et al.*, 2012:755). The Senate, in particular, has proven to have a tenacious grip on

administrations' ability to support and enact global climate change agreements (Bang *et al*., 2012:756). Therein, differing perceptions of the costs and benefits that will be accrued as a result of the hierarchy of policy goals has led to stalemate between the executive and legislative branches of government. With the election of Donald Trump, the fluid US political system appears set to once again meander on climate change and energy policies.

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